



South Central Valley/South Mother Lode Subregion

2026 Overview

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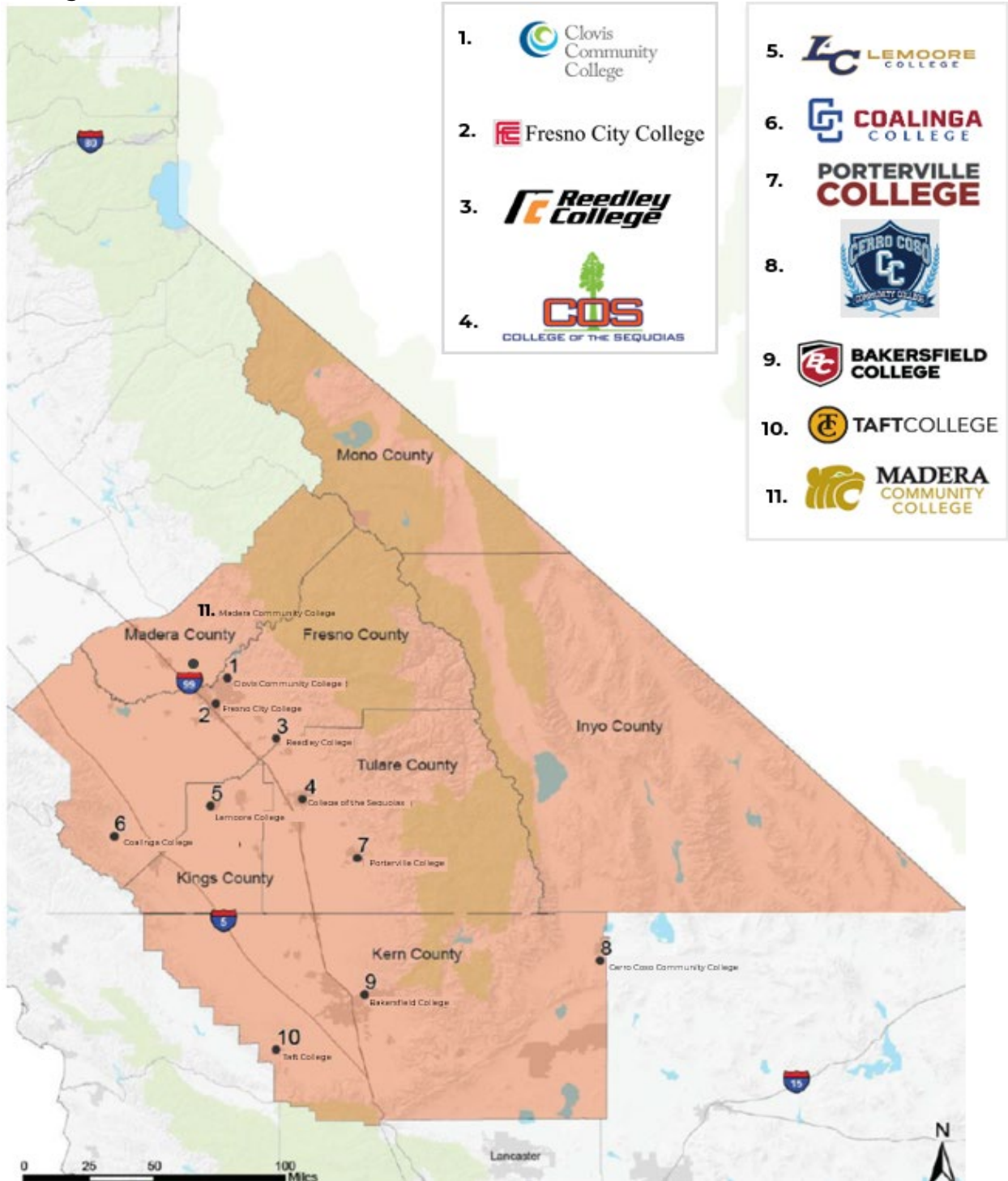
California
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South Central Valley/South Mother Lode College Area

Exhibit 1. Map of community colleges in the South Central Valley/South Mother Lode subregion



Executive Summary

The Central Valley/Mother Lode Center of Excellence for Labor Market Research (CVML COE) analyzed labor market information and postsecondary education data to compile an overview of the South Central Valley/South Mother Lode (CVML-S) subregion's middle-skill workforce and training programs. This report examines where job growth is projected to occur and estimates potential worker shortages to fill middle-skill jobs. Estimates of workforce gaps are provided utilizing the Chancellor's Office priority sectors.¹ The subregional community colleges may use this framework to facilitate program development to address the identified gaps. The middle-skill workforce is analyzed using occupational demand estimates, earnings, demographics, and the relevant supply from postsecondary institutions. Demographic information for the subregion, K-12 institutions, and community colleges is also provided in this report, offering a unique view of how subregional demographics align with education programs and the middle-skill workforce.

The middle-skill occupations within the 10 sectors detailed in this report are projected to have more than 61,900 job openings annually in the subregion over the next five years. Subregional postsecondary institutions have conferred an average of 16,838 awards annually over the last three academic years. The difference between the projected workforce demand and the average number of awards issued by subregional postsecondary institutions indicates an undersupply of 45,090 workers in the subregion. The three sectors with the greatest number of annual job openings also have the largest gaps in workforce supply in the subregion:

- Health: 15,707 workers
- Business and Entrepreneurship: 6,939 workers
- Advanced Transportation and Logistics: 3,805 workers

Sectors with the smallest workforce supply gaps include advanced manufacturing (a shortage of 1,562 workers) and public safety (a shortage of 1,685 workers). However, it should be noted that these sectors also comprise the smallest share of demand. On average, the sectors issuing the most awards each year are the health sector (5,029 awards), the education sector (1,933 awards), and the advanced transportation and logistics sector (1,731 awards). The information and communication technologies (ICT)/digital media sector has issued the fewest awards (852 awards), followed by advanced manufacturing (901 awards).

Other findings:

- The health sector is projected to have the most demand for middle-skill workers over the next five years, accounting for 33% of the projected middle-skill workforce demand in the subregion.
- ICT/digital media, business and entrepreneurship, agriculture, water, and environmental technologies, and health have the largest supply gaps in proportion to their respective demand. These sectors play a critical role in powering the subregional economy and intersect with other fields of work of subregional importance, such as business and agriculture.
- Education, public safety, and advanced manufacturing have the smallest supply gaps in proportion to their projected demand.

¹ Referred to henceforth as sectors in this report, the 10 sectors analyzed by the COE adhere to the sector title designations from the California Community Colleges Chancellor's Office: <https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Workforce-and-Economic-Development/Strong-WorkforceProgram/SWP-Archive/Events/K12-SWP-Industry-Sector-Crosswalk>.

Introduction

The Center of Excellence has conducted an extensive labor market analysis of the seven-county South Central Valley/South Mother Lode subregion. The community colleges in the subregion are shown in Exhibit 1. This report analyzes 10 of the California Community College Chancellor's Office (CCCCO) priority and emerging sectors, comparing workforce demand to postsecondary supply. A sector represents a cluster or grouping of primary occupations, comprising a segment of one or multiple industries. For each sector, the report details current employment numbers, projected occupational demand, wages, common skills from job postings, the demographic composition of the workforce, and a three-year average supply of awards (degrees and certificates) from two-year higher education institutions. A comparison of workforce demand, measured by annual job openings, with educational supply, assessed by the three-year average awards issued by subregional community colleges, was conducted at the sector and subregional levels. This type of analysis has the potential to yield insights into the alignment of educational programs with the workforce demand.

Methodology

As the Centers of Excellence for Labor Market Research primarily serve the needs of California Community Colleges, this analysis focuses on middle-skill occupations. Middle-skill occupations are those that typically require more than a high school education and less than a bachelor's degree. Some occupations outside of this narrow definition are considered middle-skill due to the number of incumbent workers with a community college education and the existence of relevant training programs offered by community colleges. Demand for middle-skill occupations is assessed by the number of annual job openings expected over the next five years, calculated from occupational projections based on historical growth estimates. Occupational earnings are compared to the living wage estimate of a single adult in the Central Valley/Mother Lode region, \$16.48² to provide insight into occupational pathways that offer workers careers that facilitate economic mobility. However, since the 2026 minimum wage in California is \$16.90, the higher of the two wage estimates is used to assess occupational earnings. Race/ethnicity data are provided at the subregional level and for the middle-skill workforce within each sector to facilitate conversations on equity.

Each sector of the report contains an analysis of postsecondary supply, which counts awards by TOP6 codes for programs listed in the Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP). Appendix B contains the count of awards issued by postsecondary education institutions in the subregion, organized by sector. Appendix C details the educational attainment typically required for the top occupations in each sector.

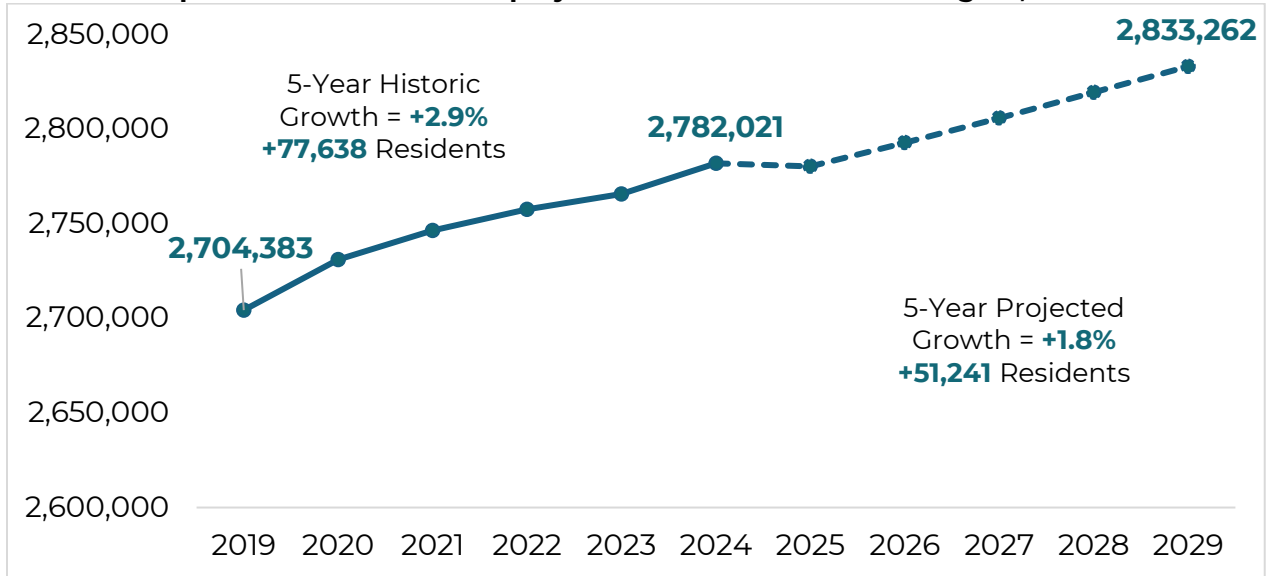
² The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>. Please note that the living wage of \$16.48 in the Central Valley/Mother Lode Region is an average of the living wages across the region's 15 counties from the Center for Women's Welfare, University of Washington. (2024). *The self-sufficiency standard for California 2024*. <https://selfsufficiencystandard.org/california/>

Subregional Overview

Residential Population

According to the latest U.S. Census data, the CVML-S subregion was home to approximately 2.78 million residents in 2024 (Exhibit 2). Between 2019 and 2024, the subregion added over 77,600 residents. Between 2024 and 2029, the subregion is projected to grow by 1.8%, adding nearly 51,200 new residents, for a total of nearly 2.83 million residents.

Exhibit 2: Population estimates and projections in the CVML-S subregion, 2019-2029



Demographics

The CVML-S subregion's gender composition is the same as the state's. The population is equally divided between men and women. Exhibit 3 shows projected changes in the CVML-S subregion's race/ethnicity demographics by 2029. The largest group in the subregion by race/ethnicity is White, Hispanic, totaling nearly 1,461,900 residents in 2024. The number of individuals identifying as White, non-Hispanic, the second largest demographic group in the subregion, is expected to decline by more than 69,800 residents over the next five years. Rapid growth rates are projected for residents identifying as Asian, non-Hispanic (10% growth), two or more races, Hispanic, 10% growth; and Asian, Hispanic (12% growth).

The most substantial population growth by number of residents is projected for:

- White, Hispanic 85,267, representing 6% growth
- Asian, non-Hispanic residents, an increase of 18,928, 10% growth
- Two or More Races, non-Hispanic, 4,399, 8% growth

Exhibit 3. Projected change in race/ethnicity in the CVML-S subregion, 2024-2029

Race/Ethnicity	2024	2029	5-Year Change	5-Year % Change
White, Hispanic	1,461,864	1,547,131	85,267	6%
White, Non-Hispanic	765,026	695,213	(69,813)	(9%)

Race/Ethnicity	2024	2029	5-Year Change	5-Year % Change
Asian, Non-Hispanic	194,554	213,482	18,928	10%
Black, Non-Hispanic	114,620	114,410	(210)	(0%)
American Indian or Alaskan Native, Hispanic	70,132	74,233	4,101	6%
Two or More Races, Non-Hispanic	54,191	58,590	4,399	8%
Two or More Races, Hispanic	39,162	43,054	3,892	10%
Black, Hispanic	32,344	34,402	2,058	6%
Asian, Hispanic	22,841	25,486	2,645	12%
American Indian or Alaskan Native, Non-Hispanic	19,222	18,685	(537)	(3%)
Native Hawaiian or Pacific Islander, Hispanic	4,325	4,588	263	6%
Native Hawaiian or Pacific Islander, Non-Hispanic	3,740	3,988	248	7%
Total	2,782,021	2,833,262	51,241	2%

Applying an equity lens to the data by examining cohort percentage reveals that residents identifying as Hispanic represented 59% of the total population in 2024. The Black population's overall percentage representation of 4% has remained stable and is projected to do so through 2029. The White residential cohort is projected to decline by more than 69,800 residents, or approximately 9% (Exhibit 4).

Exhibit 4. Projected change in Hispanic vs. non-Hispanic races/ethnicities in CVML-S Subregion, 2024-2029

Race/Ethnicity	2024	2029	Change	% Change	% of Cohort
Hispanic	1,630,668	1,728,895	98,227	6%	59%
White	765,026	695,213	(69,813)	(9%)	27%
Asian	194,554	213,482	18,928	10%	7%
Black	114,620	114,410	(210)	(0%)	4%
Two or More Races	54,191	58,590	4,399	8%	2%
American Indian or Alaskan Native	19,222	18,685	(537)	(3%)	0.7%
Native Hawaiian or Pacific Islander	3,740	3,988	248	7%	0.1%
Total	2,782,021	2,833,262	51,241	2%	100%

Changes in the residential population by age cohort may indicate future demand for educational services and have workforce implications. The 15-to-19 age group is projected to decline by 1% over the next five years, which is of immediate relevance for community college planning in the subregion, while younger cohorts are projected to decrease in size (Exhibit 5). The 20-to-24 age cohort is expected to grow by 10%, representing an increase of over 18,700 residents.

Exhibit 5. Projected change in age cohorts in the CVML-S subregion, 2024–2029

Age Cohort	2024	2029	Change	% Change	2024 % of Cohort
Under 5 years	187,798	185,324	(2,474)	(1%)	7%
5 to 9 years	209,269	192,199	(17,070)	(8%)	8%
10 to 14 years	226,928	215,965	(10,963)	(5%)	8%
15 to 19 years	224,097	222,795	(1,302)	(1%)	8%
20 to 24 years	197,030	215,750	18,720	10%	7%
25 to 29 years	196,267	199,171	2,904	1%	7%
30 to 34 years	210,722	197,219	(13,503)	(6%)	8%
35 to 39 years	197,148	211,619	14,471	7%	7%
40 to 44 years	186,324	195,331	9,007	5%	7%
45 to 49 years	160,575	181,073	20,498	13%	6%
50 to 54 years	146,474	152,197	5,723	4%	5%
55 to 59 years	139,769	140,974	1,205	1%	5%
60 to 64 years	137,943	131,235	(6,708)	(5%)	5%
65 to 69 years	120,761	123,629	2,868	2%	4%
70 to 74 years	95,661	105,066	9,405	10%	3%
75 to 79 years	69,622	77,864	8,242	12%	3%
80 to 84 years	41,491	51,021	9,530	23%	1%
85 years and over	34,142	34,828	686	2%	1%
TOTAL	2,782,021	2,833,262	51,241	2%	100%

When the age of residents and the projected change in two separate age groups – the 20-to-54 age cohort and the 55+ age cohort – are considered, the analysis shows that both cohorts will add residents over the next five years. The 20 to 54 cohort is projected to grow faster than the 55+ cohort, adding significantly more residents to the subregion (Exhibit 6).

Exhibit 6. Projected change in two age cohorts in the CVML-S subregion, 2024–2029

Age Cohort	2024	2029	Change	% Change
20 to 54 years	1,294,540	1,352,361	57,821	4%
55+ years	639,389	664,618	25,229	2%

In evaluating the age-cohort data to gauge the future education and hiring needs of the subregion’s labor market, the analysis incorporated the traditional lens of workers retiring out of the labor force at age 55. This renders a projection picture of less than one-quarter of the population leaving the workforce by 2029. However, many workers are opting to work until age 65 (Exhibit 7).

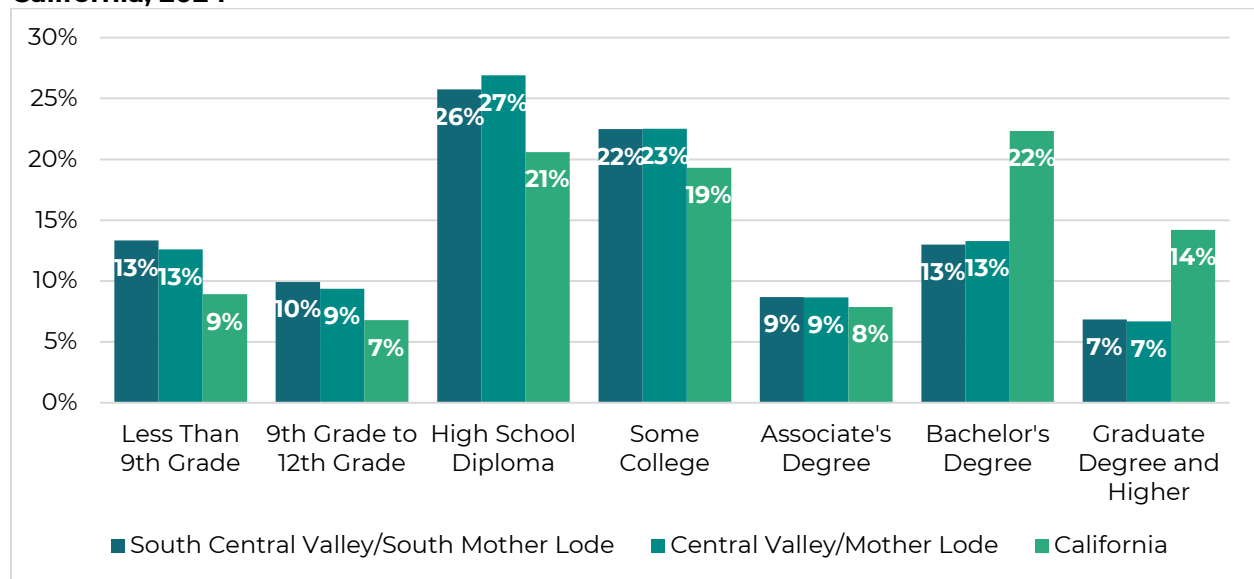
Exhibit 7. Projected change in age cohorts, grouped by young children, school age, working age, or retiring in the CVML-S subregion, 2024–2029

Category	Age Cohort	2024 Population	2029 Population	Change	% Change	2024 % of Cohort	2029 % of Cohort
Young Children	Under 5 years	187,798	185,324	(2,474)	(1%)	7%	7%
School Age	5 to 24 years	857,324	846,709	(10,615)	(1%)	31%	30%
Working Age	25 to 54 years	1,097,510	1,136,611	39,101	4%	39%	40%
Retiring	55 Plus	639,389	664,618	25,229	4%	23%	23%
	Total	2,782,021	2,833,262	51,241	2%	100%	100%
Still Working	55 to 64	277,712	272,209	(5,503)	(2%)	10%	10%
Retiring	65 Plus	361,677	392,409	30,732	8%	13%	14%

Educational Attainment

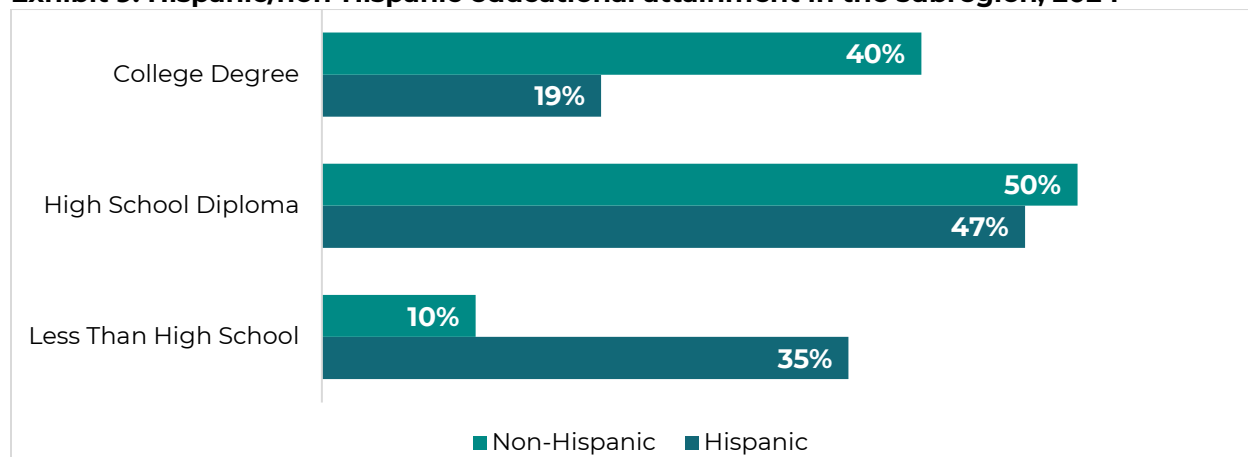
Exhibit 8 summarizes educational attainment data for the population's residents aged 25 and older. The CVML-S subregion continues to trail the state in bachelor's degree attainment, with 13% of the adult population holding a bachelor's degree, compared to 22% statewide. Regarding associate degree attainment, the subregion and California are similar, 9% and 8%, respectively. The subregion has a higher percentage of residents with a high school education, 26% compared to 21% in the state. A slightly greater proportion of the subregion has completed some college, 22%, compared to 19% in California as a whole. Compared to the state, the subregion has larger shares of residents with less than a 9th grade education and less than a 12th grade education, which indicates a greater subregional need for adult education. In the subregion, 13% of residents have less than a 9th grade education, compared to 9% in the state.

Exhibit 8. Educational attainment comparison of the CVML-S subregion, CVML Region, and California, 2024



In the subregion, 40% of the non-Hispanic adult population has a college degree, compared to 19% of the Hispanic population (Exhibit 9). A comparison of this data to the 2025 CVML Overview revealed a 2-percentage-point increase for non-Hispanic residents and a 1-percentage-point increase for Hispanic residents. As observed in the 2025 CVML Overview, a greater proportion of Hispanic residents have completed less than a high school education, 35%, compared to non-Hispanic residents, 10%.

Exhibit 9. Hispanic/non-Hispanic educational attainment in the subregion, 2024



Labor Force & Employment

The size and characteristics of a subregion’s labor force are important considerations in workforce planning. Labor force, employment, and unemployment data are based upon “place of residence” – where people live, regardless of where they work. Individuals who have more than one job are counted only once. These data elements differ from industry employment estimates that are “place-of-work” based, where the employer/workplace is located, regardless of where the employee resides. (For terms and definitions, see Appendix A.) The labor force in the CVML-S subregion increased by 65,270 workers over the last five years, or 5.5% (Exhibit 10). Employment grew by 51,900 workers, from 1,084,300 workers in 2019 to 1,136,200 workers in 2024. Unemployment rose from 7.9% in 2019 to 8.6% in 2024.

Exhibit 10. Labor force size, employment, and unemployment in the CVML-S subregion, 2019-2024

Metric	2019	2024	5-Year Change
Labor Force	1,177,540	1,242,810	65,270
Employment	1,084,310	1,136,210	51,900
Unemployment	93,130	106,500	13,370
Unemployment Rate	7.9%	8.6%	0.7%

For context, over the last five years, the state’s labor force has added 224,000 workers or 1.2%, less than the subregion (Exhibit 11). Approximately 21,000 workers in California were lost from the employment pool between 2019 and 2024. The number of unemployed individuals increased by 244,900, growing the unemployment rate by 1.2%.

Exhibit 11. Labor force size, employment, and unemployment in California, 2019-2024

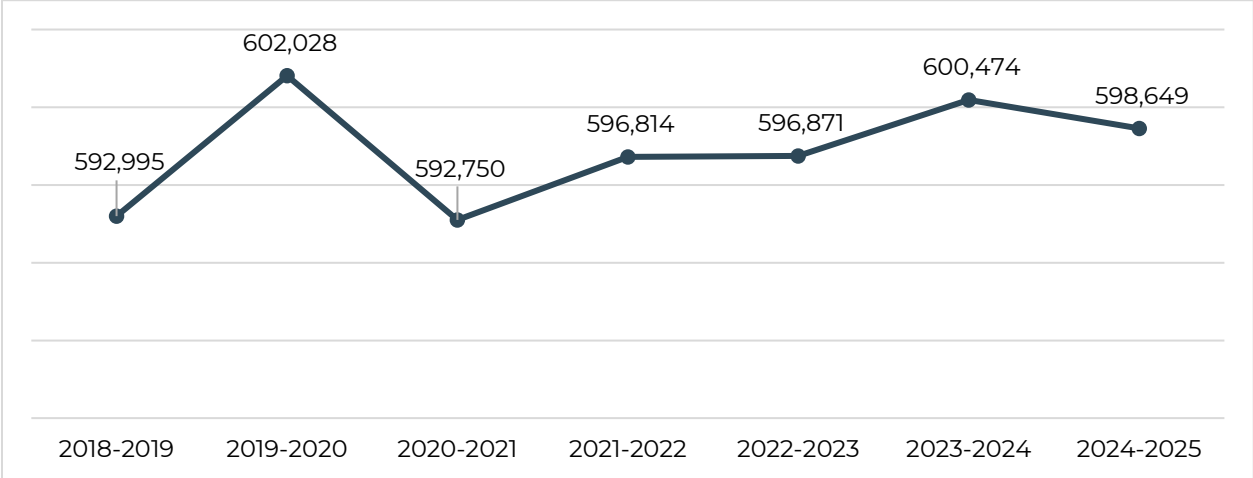
Metric	2019	2024	5-Year Change
Labor Force	19,420,100	19,644,100	224,000
Employment	18,621,900	18,600,900	(21,000)
Unemployment	798,200	1,043,100	244,900
Unemployment Rate	4.1%	5.3%	1.2%

K-12 Enrollment and Demographics

Subregional K-12 Enrollment

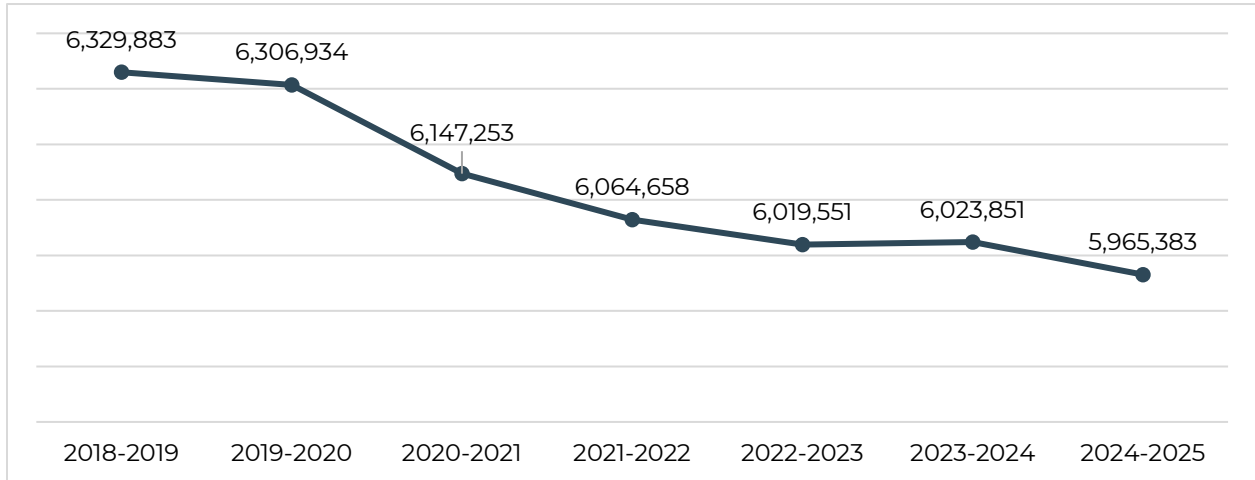
Exhibit 12 displays total K-12 enrollment in the subregion from the 2018-2019 academic year to the 2024-2025 academic year. Until the 2019-20 academic year, K-12 enrollment had been steadily increasing. During the COVID-19 pandemic, enrollment dropped the most between the 2019-20 and 2020-21 academic years, by 9,278 students. Since the 2020-21 academic year, enrollments have increased by 1.0%, adding nearly 5,900 students to the subregion. Enrollments have recovered and surpassed pre-pandemic highs.

Exhibit 12. Total enrollment for grades K-12 in the subregion, academic years 2018-2019 to 2024-2025



By comparison, K-12 enrollment has been steadily declining in the state since 2018-2019. Consistent with enrollment trends in the subregion, enrollment declined substantially during the COVID-19 pandemic in the 2020-21 academic year. Since the 2020-2021 academic year, statewide K-12 enrollments have declined by nearly 181,900 students, or 3.0%.

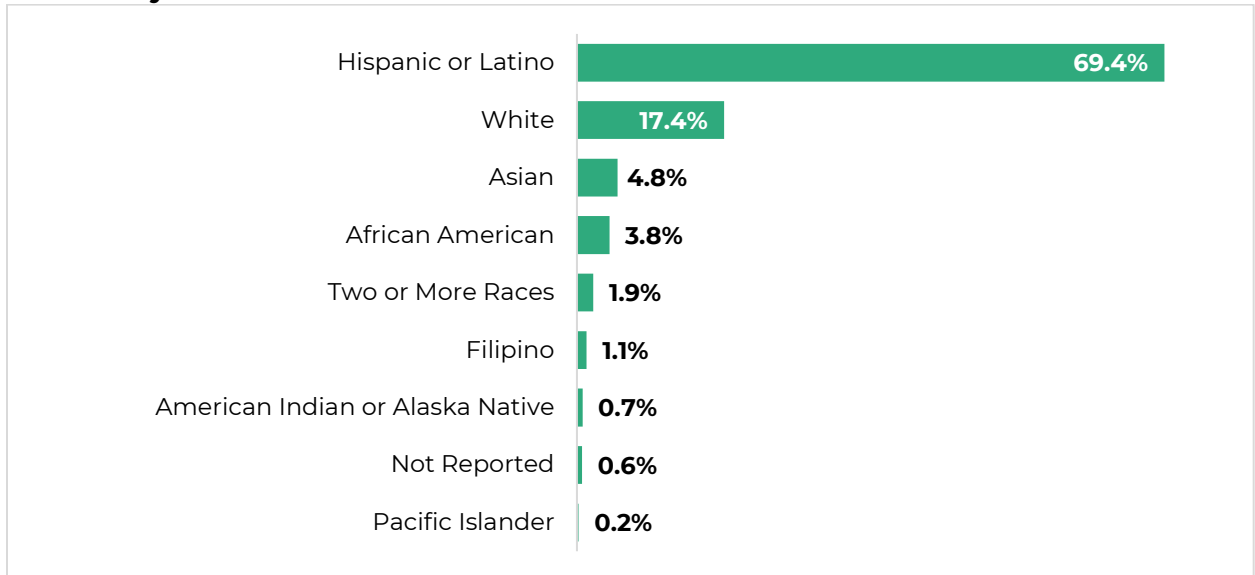
Exhibit 13. Total enrollment for grades K-12 in California, academic years 2018-2019 to 2024-2025



High School Graduation Demographics

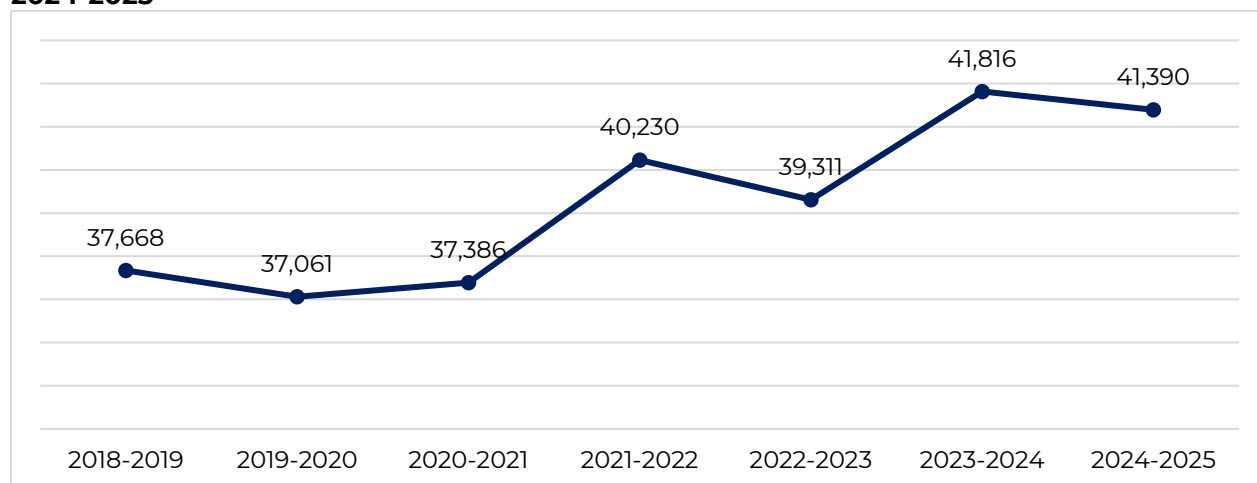
Students who identify as Hispanic or Latino comprise the largest share of high school graduates in the subregion, totaling over 28,700 in the 2024-2025 academic year. The second-largest group is White students, with approximately 7,200, followed by Asian American students, nearly 2,000. Students who identify as American Indian or Alaska Native, and those who identify as Pacific Islander, comprise the smallest groups in terms of race/ethnicity data reporting.

Exhibit 14. High school graduates by race/ethnicity in the CVML-S subregion, 2024-2025 academic year



The graduation trend in the subregion has increased since the 2018-2019 academic year. Since 2018-2019, the number of students graduating from high school has increased by 9.9%, or more than 3,700 students.

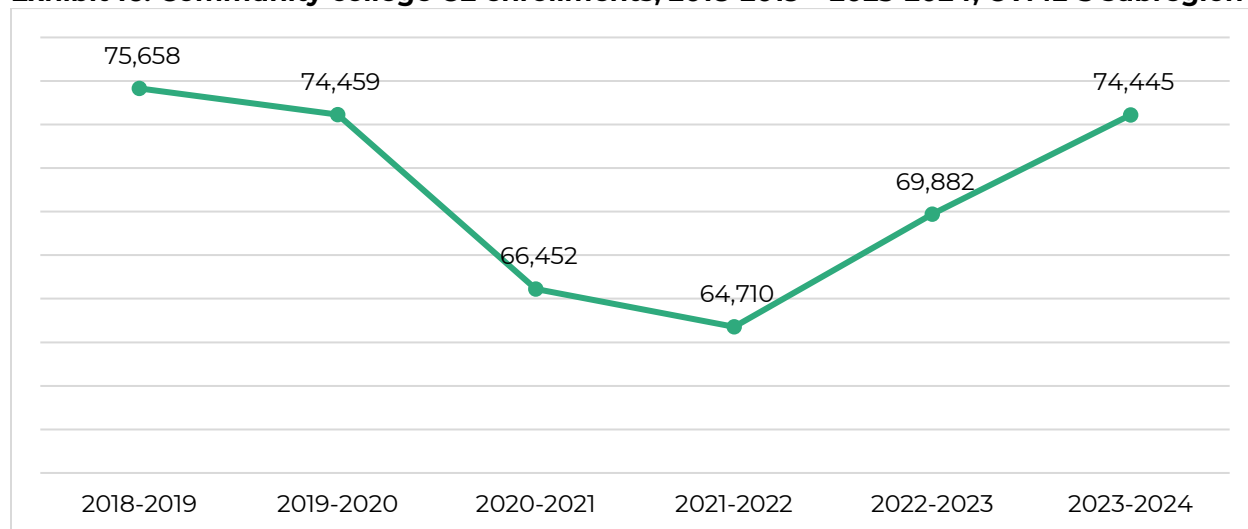
Exhibit 15. High school graduation trend in the subregion, academic years 2018-2019 to 2024-2025



CE Enrollment and Demographics

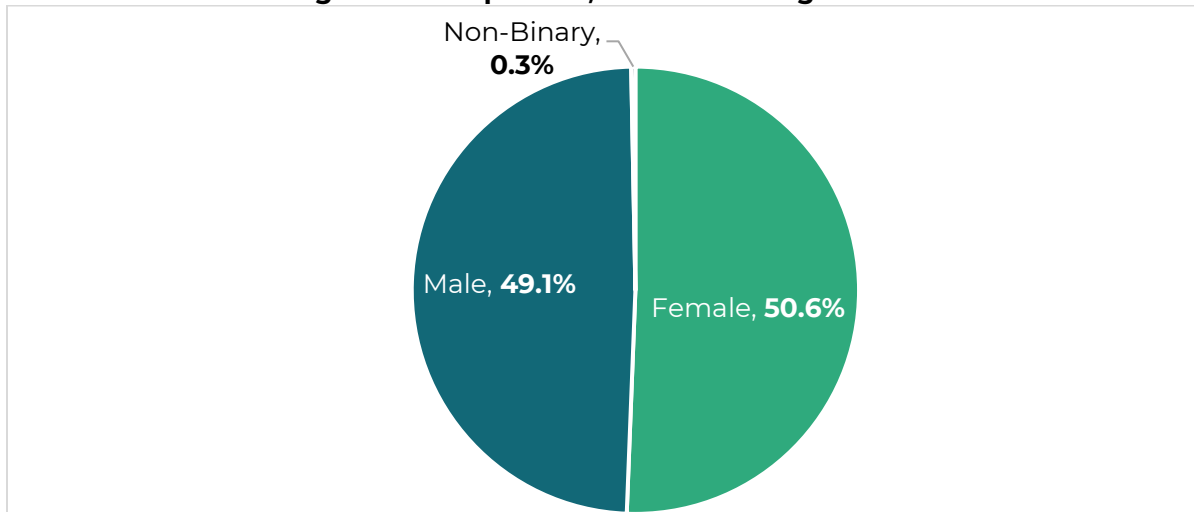
Exhibit 16 displays the number of community college career education (CE) enrollments from the 2018-2019 academic year to the 2023-2024 academic year. Between 2018-2019 and 2021-2022, enrollments steadily declined. Over this period, enrollments declined by more than 10,900 students, or by 14%. Since the 2021-2022 academic year, enrollments have increased considerably. Despite a 15% enrollment growth since 2021-2022, enrollment has yet to recover to pre-COVID-19 levels.

Exhibit 16. Community college CE enrollments, 2018-2019 – 2023-2024, CVML-S subregion



Female students comprise a slightly larger percentage of students enrolled in career education (CE) programs than male students in the subregion (Exhibit 17). Female students account for 50.6% of CE students, while men account for 49.1%. Students identifying as non-binary accounted for 0.3% of all CE students.

Exhibit 17. CE student gender comparison, CVML-S subregion



Two-thirds, 66% of CE students, identify as Hispanic (Exhibit 18). About 20% identify as White, 4% identify as Asian American, and 4% identify as Black. Approximately 3% of students identify as two or more races.

Exhibit 18. Race/ethnicity of CE students, CVML-S subregion

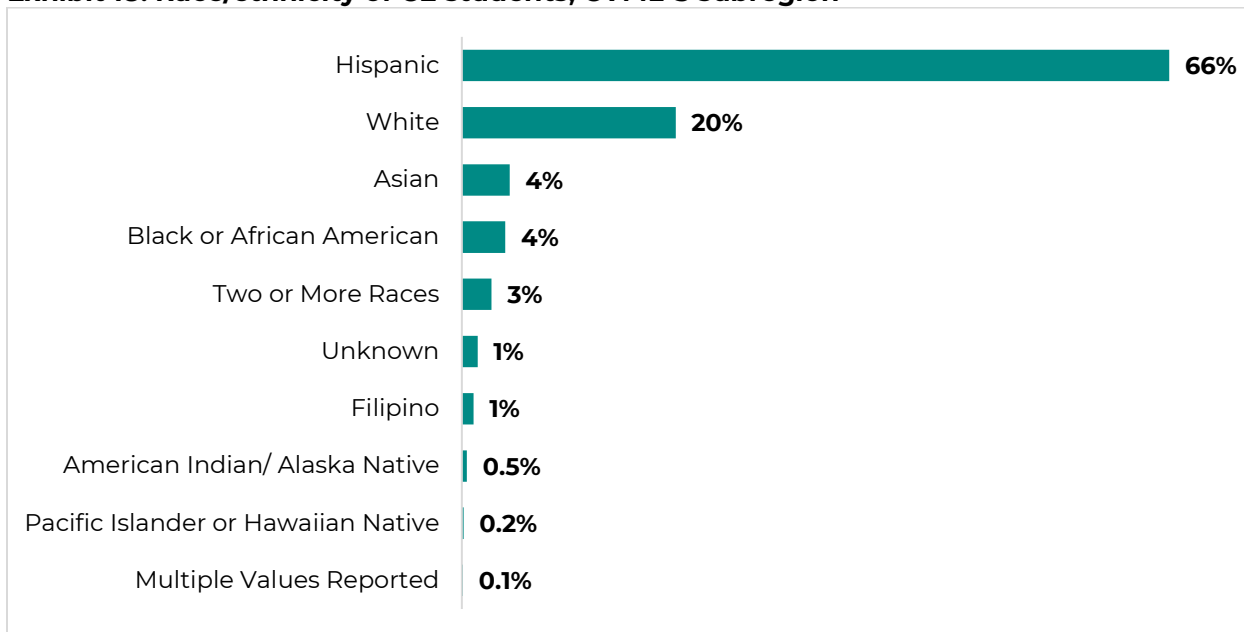
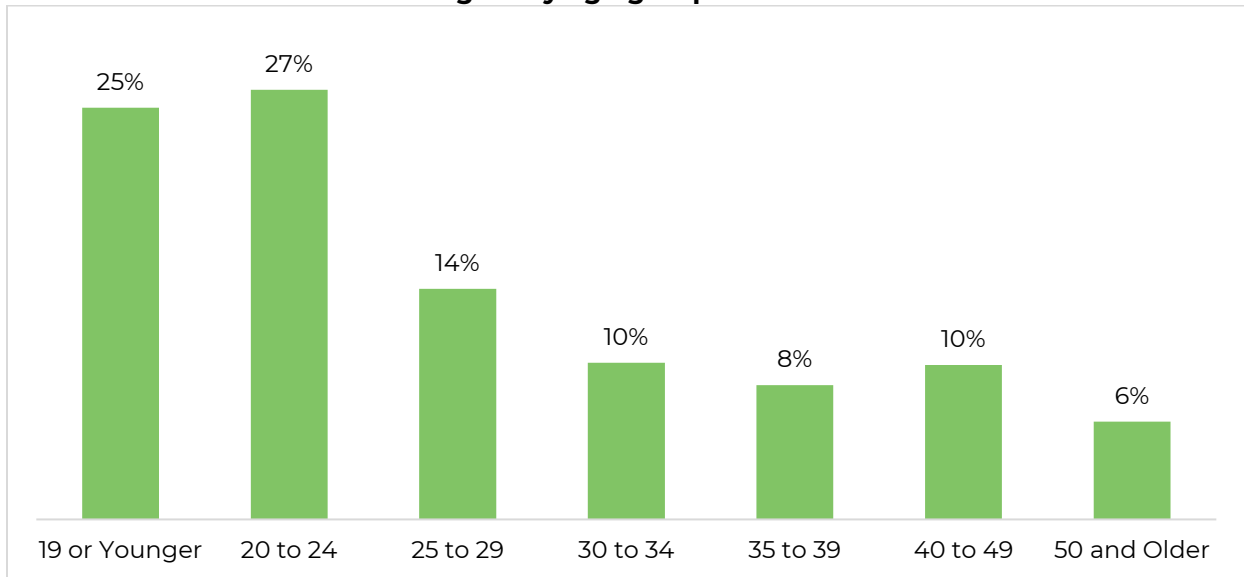


Exhibit 19 displays the share of CVML-S community college career education students by age group. More than half of the students are 24 or younger, accounting for approximately 52% of enrollments.

Exhibit 19. Students in the subregion by age group



In the 2023-24 academic year, the CVML-S subregion's career education programs with the largest enrollments were health, public safety, business and entrepreneurship, and ICT/digital media (Exhibit 20).

Exhibit 20. Share of CE enrollments by sector in the CVML-S subregion, 2023-24 academic year

Sector	Percent
Health	20%
Public Safety	16%
Business & Entrepreneurship	15%
ICT/Digital Media	14%
Education & Human Development	13%
Advanced Manufacturing	8%
Agriculture, Water & Environmental Technologies	6%
Unassigned	4%
Energy, Construction & Utilities	3%
Advanced Transportation & Logistics	2%
Retail, Hospitality & Tourism	1%
TOTAL	100%

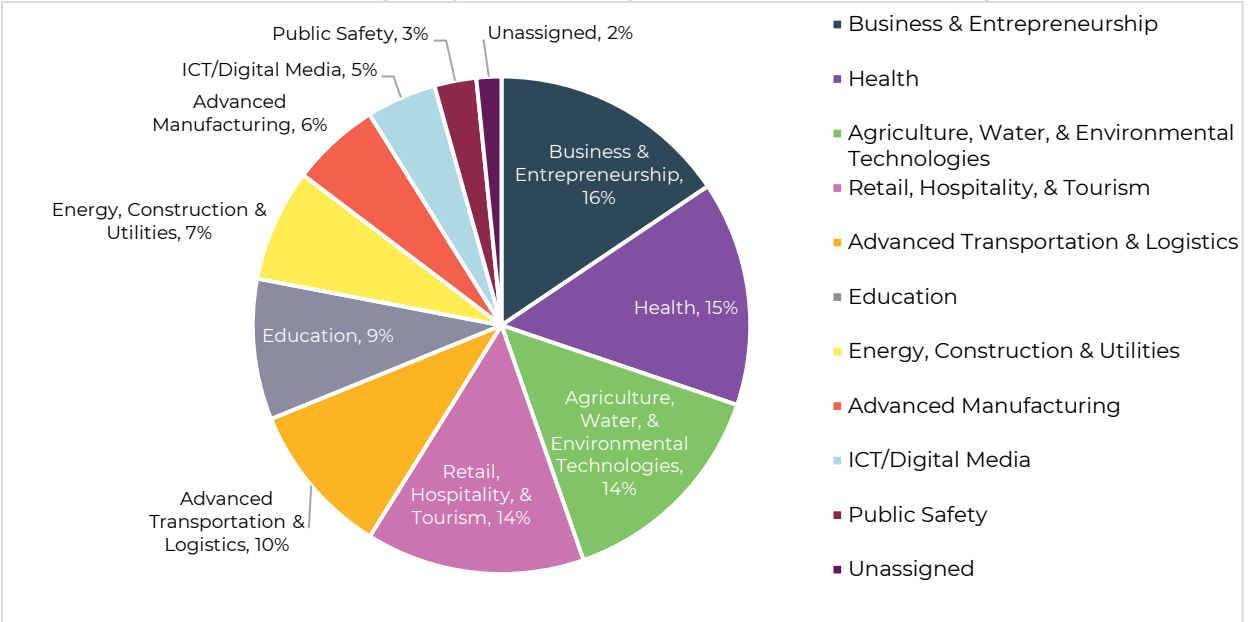
Sector Composition

Across all occupational sectors, there were more than 1.20 million jobs in the subregion in 2024. When entry-level, middle-skill, and above-middle-skill jobs are all accounted for, the business and entrepreneurship sector had the most jobs in 2024, with over 187,200 jobs in the CVML-S subregion. This was followed by the health and agriculture, water, and environmental technologies sectors, which had over 176,000 and 174,000 jobs, respectively (Exhibit 21). Subregional employment is concentrated in the top five occupational sectors, accounting for approximately 69% of subregional jobs (Exhibit 22).

Exhibit 21. Number of jobs by sector in the subregion, 2024

Sector	2024 Jobs
Business & Entrepreneurship	187,235
Health	176,012
Agriculture, Water & Environmental Technologies	174,036
Retail, Hospitality & Tourism	171,178
Advanced Transportation & Logistics	120,034
Education	110,160
Energy, Construction & Utilities	87,979
Advanced Manufacturing	69,476
ICT/Digital Media	54,822
Public Safety	32,788
Unassigned	19,510
TOTAL	1,203,230

Exhibit 22. Sector percentages by number of jobs in the CVML-S subregion, 2024

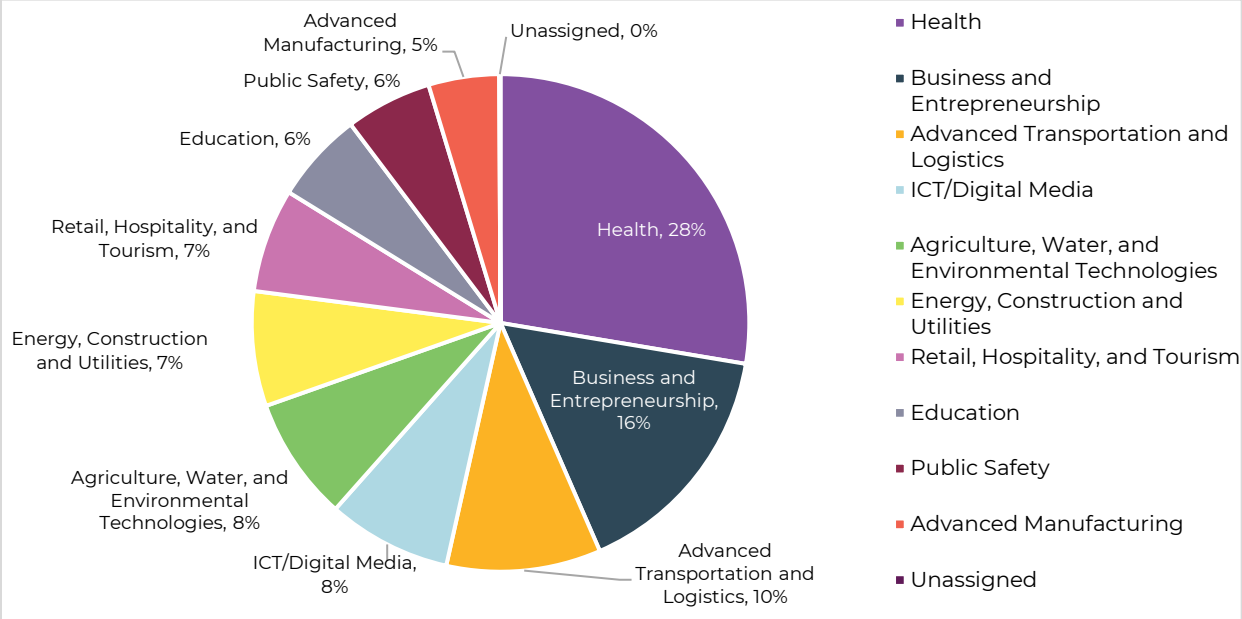


Middle-Skill Jobs Composition

Of the more than 1.20 million jobs in the subregion, over 490,600 jobs are middle skill, requiring more education or training than a high school diploma but less than a bachelor’s degree. The largest sectors by number of middle-skill jobs are health (135,580 jobs), business and entrepreneurship (77,667 jobs), and advanced transportation and logistics (49,268 jobs). These sectors lead all others in annual job openings. Sectors with the fewest total jobs are advanced manufacturing (22,503), public safety (27,550), and education (29,000). Exhibit 23 shows the percentages that the sectors comprise in terms of overall middle-skill employment in the subregion.

Regarding projected occupational demand by sector, advanced manufacturing, education, and public safety are the smallest sectors in terms of total middle-skill employment and are expected to offer a much smaller share of annual openings compared to health, business and entrepreneurship, and advanced transportation and logistics.

Exhibit 23. 2024 CVML-S subregion middle-skill employment



Gap Analysis Summary

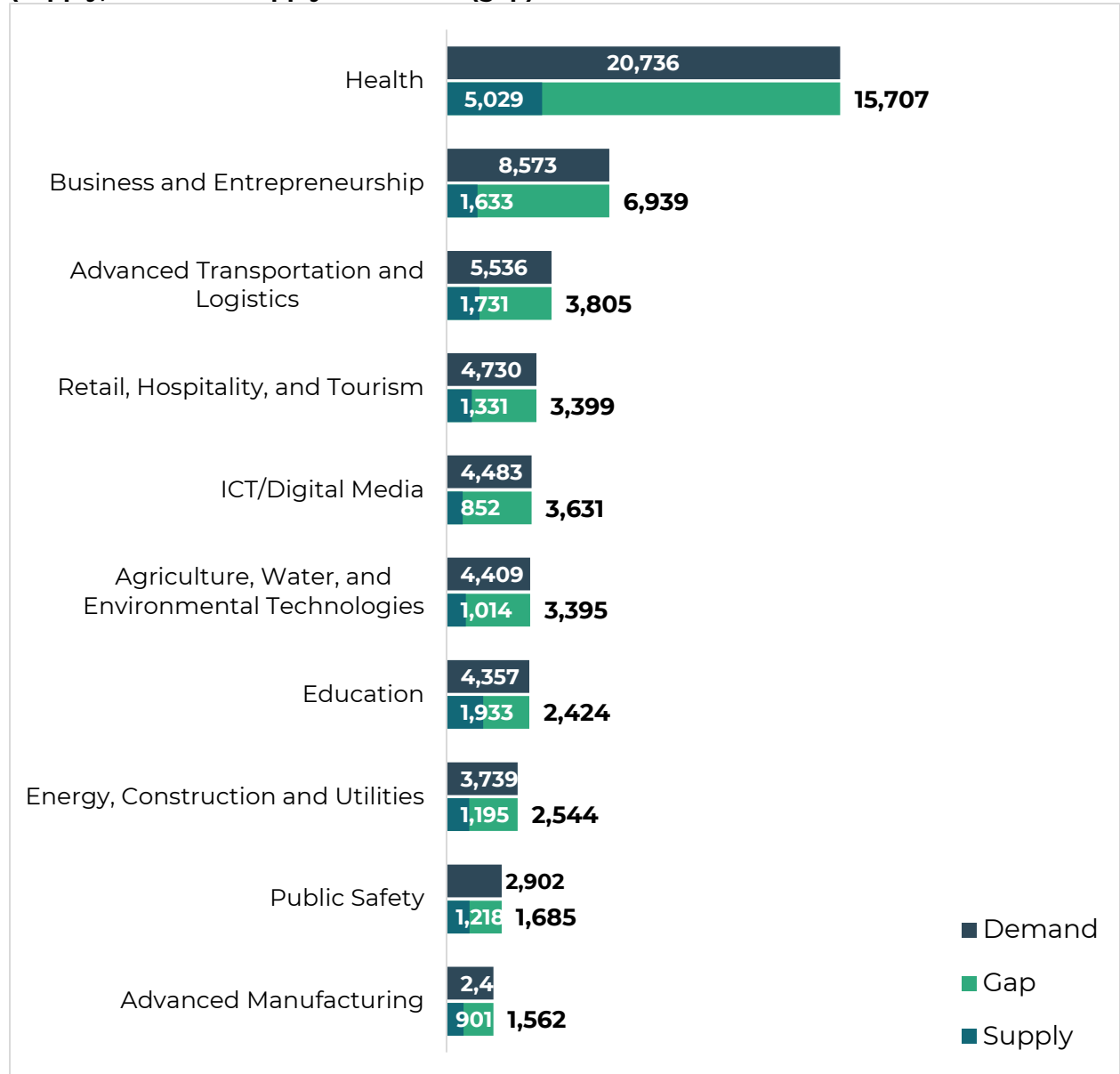
Over 61,900 annual openings are projected for the 10 occupational sectors displayed below. Overall, there is a supply gap of nearly 45,100 workers in the CVML-S subregion. The sectors with the largest supply gaps are health (a shortage of 15,707 workers), business and entrepreneurship (6,939 workers), and advanced transportation and logistics (3,805 workers) (Exhibit 24). Sectors with the smallest gaps are energy, construction, and utilities, public safety, and advanced manufacturing. Exhibit 25 visually depicts the supply gaps by sector for the projected job openings, with the supply gap shown in green.

Exhibit 24. Projected middle-skill annual job openings, average annual awards, and undersupply of workers (gap), CVML-S subregion

Occupational Sector	Demand (Annual Job Openings)	Gap	Supply (Average Annual Awards)
Health	20,736	15,707	5,029
Business and Entrepreneurship	8,573	6,939	1,633
Advanced Transportation and Logistics	5,536	3,805	1,731
Retail, Hospitality, and Tourism	4,730	3,399	1,331
ICT/Digital Media	4,483	3,631	852
Agriculture, Water, and Environmental Technologies	4,409	3,395	1,014
Education	4,357	2,424	1,933
Energy, Construction, and Utilities	3,739	2,544	1,195
Public Safety	2,902	1,685	1,218
Advanced Manufacturing	2,463	1,562	901
Total	61,928	45,090	16,838



Exhibit 25. Projected middle-skill annual job openings (demand), average annual awards (supply), and undersupply of workers (gap)



Advanced Manufacturing

Summary

- There were more than 22,500 middle-skill advanced manufacturing jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,100 jobs through 2029, growing by 5%. Nearly 2,500 annual job openings are projected for middle-skill advanced manufacturing workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$22.28 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- Nearly 1,700 job ads were posted in the CVML-S subregion for the top advanced manufacturing occupations profiled in this report. The top job titles were production supervisors, quality control technicians/quality assurance technicians, and welders.
- Specialized skills: The top skills are lifting ability, food safety and sanitation, and the top certification is a Valid Driver's License (A, B, and C).

Advanced Manufacturing Demographics

Comprising 18% of the middle-skill advanced manufacturing workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 54%. The advanced manufacturing workforce contains more Hispanic or Latino and White workers than the overall middle-skill workforce. Advanced manufacturing workers have a similar age distribution to the rest of the middle-skill workforce, although slightly younger.

Exhibit 26. Gender composition of the advanced manufacturing workforce

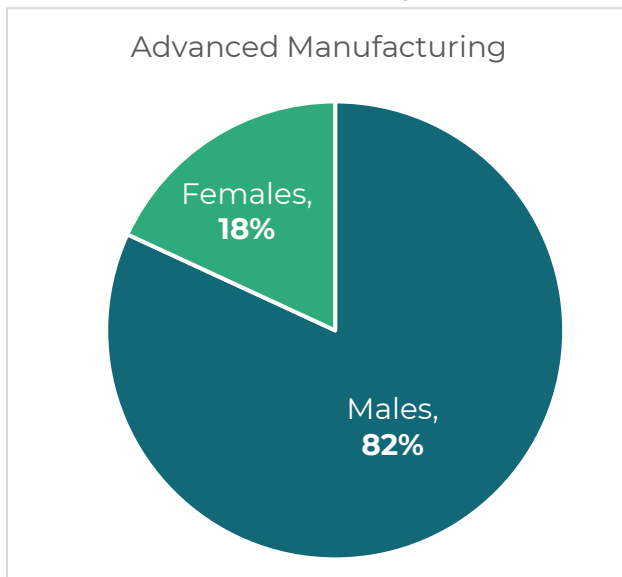


Exhibit 27. Race/ethnicity composition of the advanced manufacturing workforce

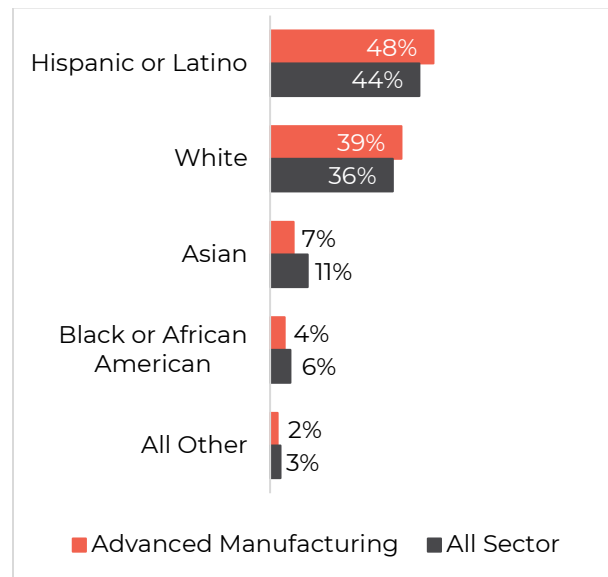
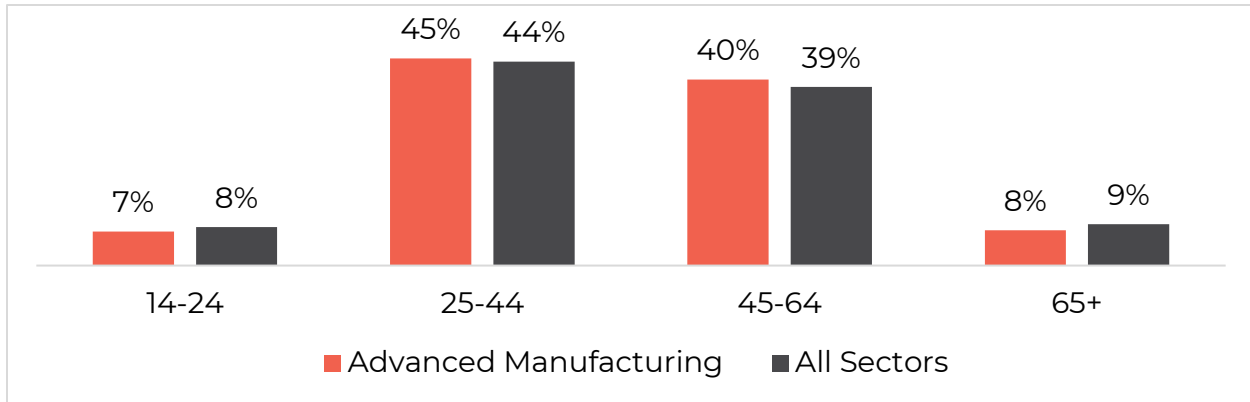


Exhibit 28. Advanced manufacturing workforce composition by age cohorts



Advanced Manufacturing Demand

Exhibit 29 displays advanced manufacturing employment and occupational projections. There were more than 22,500 middle-skill advanced manufacturing jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,100 jobs through 2029, growing by 5%. Nearly 2,500 annual job openings are projected for middle-skill advanced manufacturing workers over this timeframe. Inspectors, testers, sorters, samplers, and weighers are projected to have the most annual job openings through 2029.

Exhibit 29: Advanced manufacturing employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Inspectors, Testers, Sorters, Samplers, and Weighers	3,088	3,193	106	3%	381
First-Line Supervisors of Production and Operating Workers	3,597	3,772	175	5%	379
Industrial Machinery Mechanics	2,995	3,312	317	11%	306
Welders, Cutters, Solderers, and Brazers	2,749	2,833	84	3%	293
Machinists	973	1,015	42	4%	107
Electrical and Electronic Engineering Technologists and Technicians	726	739	13	2%	70
Computer, Automated Teller, and Office Machine Repairers	512	545	33	6%	65
Engineering Technologists and Technicians, Except Drafters, All Other	693	694	1	0%	60
Printing Press Operators	486	495	9	2%	54
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	345	394	49	14%	49
Maintenance Workers, Machinery	400	432	32	8%	43
Computer Numerically Controlled Tool Operators	413	423	10	3%	42
Electrical and Electronics Repairers, Commercial and Industrial Equipment	432	441	8	2%	38

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Chemical Technicians	294	307	14	5%	38
Molders, Shapers, and Casters, Except Metal and Plastic	263	279	16	6%	38
Top Advanced Manufacturing Occupations	17,965	18,873	909	5%	1,962
<i>All Other Advanced Manufacturing Occupations</i>	4,462	4,678	215	5%	503
Total	22,427	23,551	1,124	5%	2,465

Advanced Manufacturing Hourly Earnings

Exhibit 30 displays the hourly earnings for the top middle-skill advanced manufacturing occupations in the CVML-S subregion. Electrical and electronic engineering technologists and technicians have the highest entry-level hourly earnings in the advanced manufacturing occupational group at \$37.37 per hour.

Exhibit 30. Advanced manufacturing hourly earnings in the subregion, 2024

Occupation	Hourly Earnings		
	25th Percentile	Median	75th Percentile
Electrical and Electronic Engineering Technologists and Technicians	\$37.37	\$45.35	\$55.81
Engineering Technologists and Technicians, Except Drafters, All Other	\$36.24	\$46.67	\$55.76
Electrical and Electronics Repairers, Commercial and Industrial Equipment	\$32.57	\$39.36	\$52.14
First-Line Supervisors of Production and Operating Workers	\$26.87	\$34.81	\$42.67
Industrial Machinery Mechanics	\$23.86	\$31.20	\$38.61
Maintenance Workers, Machinery	\$23.54	\$28.84	\$34.52
Computer Numerically Controlled Tool Operators	\$21.53	\$26.24	\$29.53
Welders, Cutters, Solderers, and Brazers	\$21.23	\$24.24	\$30.59
Molders, Shapers, and Casters, Except Metal and Plastic	\$20.09	\$22.33	\$26.64
Chemical Technicians	\$19.79	\$23.30	\$28.10
Machinists	\$18.97	\$24.12	\$29.99
Computer, Automated Teller, and Office Machine Repairers	\$18.64	\$23.18	\$29.43
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	\$18.50	\$22.54	\$28.28
Inspectors, Testers, Sorters, Samplers, and Weighers	\$17.90	\$21.49	\$27.17
Printing Press Operators	\$17.41	\$21.52	\$26.93

Exhibit 31 displays the average hourly earnings for the advanced manufacturing occupational group, categorized by percentile, compared to the regional living wage. The average entry-level

hourly earnings for the middle-skill occupational group is \$22.28 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top manufacturing occupations was \$30.28 per hour over the last 12 months.

Exhibit 31. Average advanced manufacturing hourly earnings in the subregion, 2024

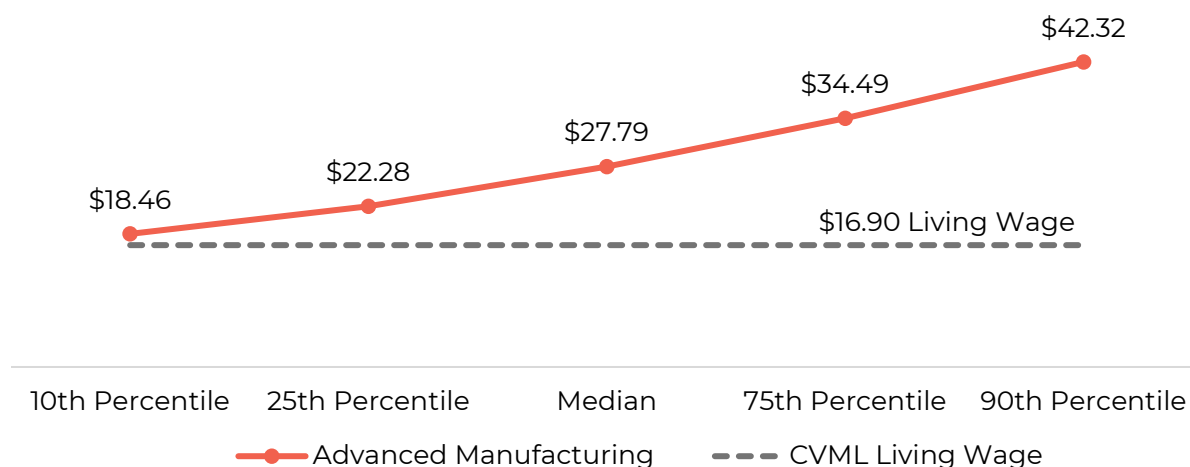


Exhibit 32 displays the certifications, specialized skills, and soft skills included in employer job ads for advanced manufacturing workers. Over the last 12 months, from February 2025 to January 2026, nearly 1,700 job advertisements were posted for the top advanced manufacturing occupations detailed in this report. Approximately half of employer job ads were posted for inspectors, testers, sorters, samplers, and weighers, and first-line supervisors of production and operating workers, indicating that skills and certification information may be skewed towards the requirements for these occupations.

Exhibit 32. Top 10 certifications, specialized skills, and soft skills in job postings for advanced manufacturing occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License (A, B, and C)	Lifting Ability	Communication
Security Clearance	Auditing	Operations
Certified Welding Inspector	Food Safety And Sanitation	Management
Forklift Certification	Continuous Improvement Process	Troubleshooting (Problem Solving)
Airframe & Powerplant (A&P) Certificate	Machinery	Leadership
American Welding Society Certification	Good Manufacturing Practices	Quality Control
ASNT Non-Destructive Tester	Packaging And Labeling	Detail Oriented
American Society For Quality (ASQ) Certified	Sanitation	Quality Assurance
Cardiopulmonary Resuscitation (CPR) Certification	Quality Management	Customer Service
First Aid Certification	Hand Tools	Microsoft Office

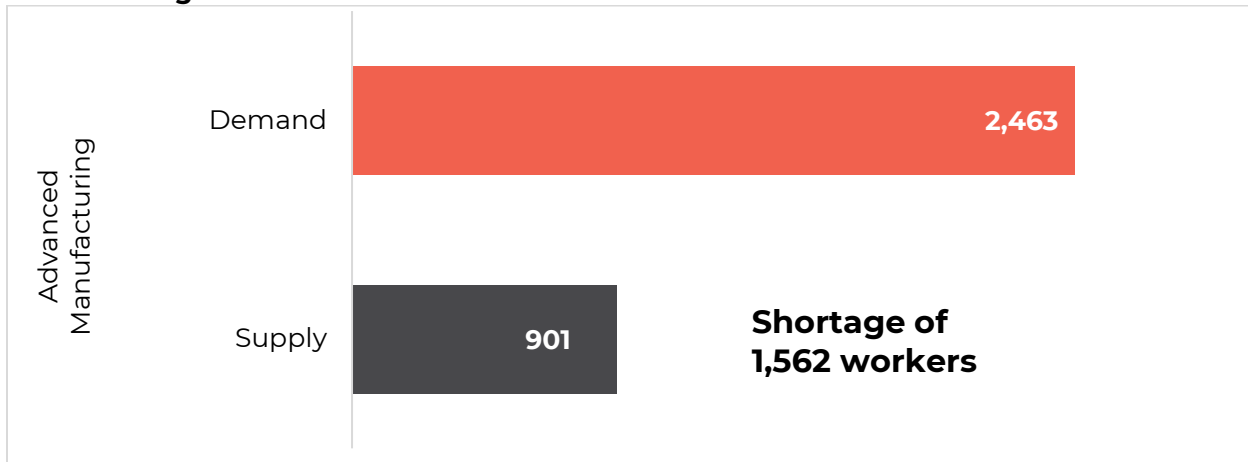
Exhibit 33 displays the community college advanced manufacturing programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 655 awards over the last three academic years from four colleges. Other postsecondary institutions issued 246 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 345 awards annually in advanced manufacturing programs. See the appendix to view award data by postsecondary institution.

Exhibit 33. Community college advanced manufacturing programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
092400 - Engineering Technology, General (requires Trigonometry)	3	1
093400 - Electronics and Electric Technology	158	3
093420 - Industrial Electronics	7	1
093600 - Printing and Lithography	3	1
094300 - Instrumentation Technology	1	1
094500 - Industrial Systems Technology and Maintenance	126	6
095000 - Aeronautical and Aviation Technology	39	1
095340 - Mechanical Drafting	4	1
095600 - Manufacturing and Industrial Technology	105	5
095630 - Machining and Machine Tools	12	2
095650 - Welding Technology	179	8
095670 - Industrial and Occupational Safety and Health	17	2
Total	655	-

Exhibit 34 compares annual employer demand for middle-skill workers in the advanced manufacturing sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 1,562 workers in the subregion’s advanced manufacturing workforce.

Exhibit 34. Advanced manufacturing workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the advanced manufacturing sector. The following 15 advanced manufacturing program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 093410 - Computer Electronics
- 093480 - Laser and Optical Technology
- 093510 - Appliance Repair
- 094330 - Vacuum Technology
- 095040 - Aircraft Electronics (Avionics)
- 095050 - Aircraft Fabrication
- 095330 - Electrical, Electronic, and Electro-Mechanical Drafting
- 095360 - Technical Illustration
- 095420 - Plastics and Composites
- 095430 - Petroleum Technology
- 095680 - Industrial Quality Control
- 095730 - Surveying
- 096100 - Optics
- 130330 - Fashion Production
- 192000 - Ocean Technology

Advanced Transportation and Logistics

Summary

- There were nearly 49,300 middle-skill advanced transportation and logistics jobs in the CVML-S subregion in 2024. This occupational group is projected to add nearly 3,600 jobs through 2029, representing a 7% increase. There are more than 5,500 annual job openings projected for advanced transportation and logistics workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$28.67 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were over 8,300 job ads posted in the CVML-S subregion for the top advanced transportation and logistics occupations profiled in this report. The top job titles were CDL-A truck drivers, maintenance supervisors, truck drivers, and automotive technicians.
- Specialized skills: The top skill is truck driving, and the top certification is a Valid Driver's License (A, B, and C).

Advanced Transportation and Logistics Demographics

Comprising 9% of the middle-skill advanced transportation and logistics workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 54%. The advanced transportation and logistics workforce contains more Hispanic or Latino workers than the overall middle-skill workforce. Advanced transportation and logistics workers have a similar age distribution to the rest of the middle-skill workforce.

Exhibit 35. Gender composition of the advanced transportation and logistics workforce

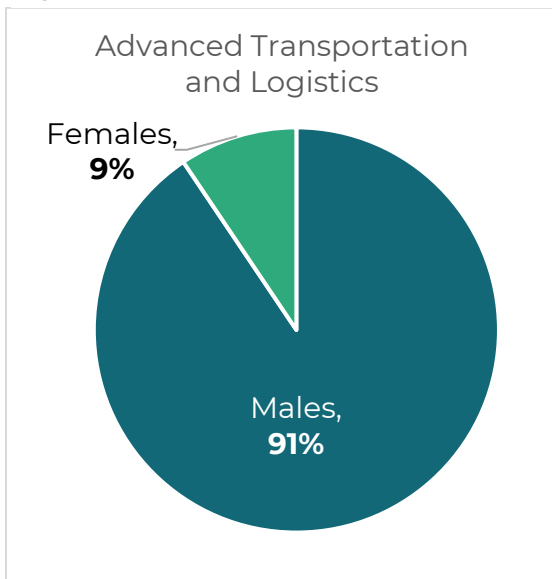


Exhibit 36. Race/ethnicity composition of the advanced transportation and logistics workforce

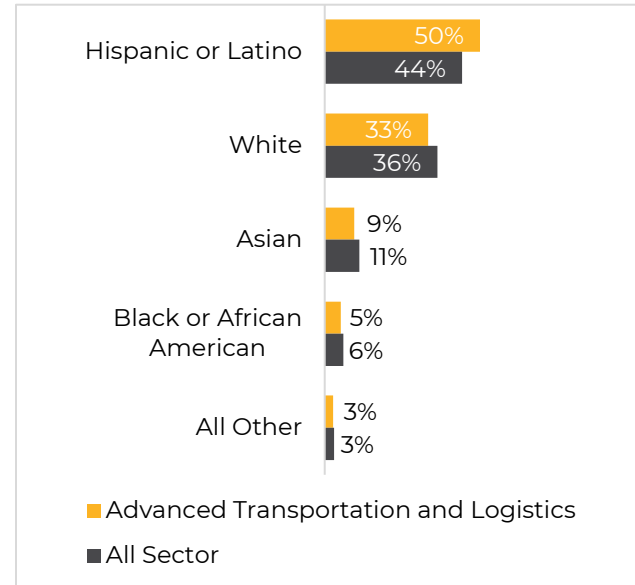
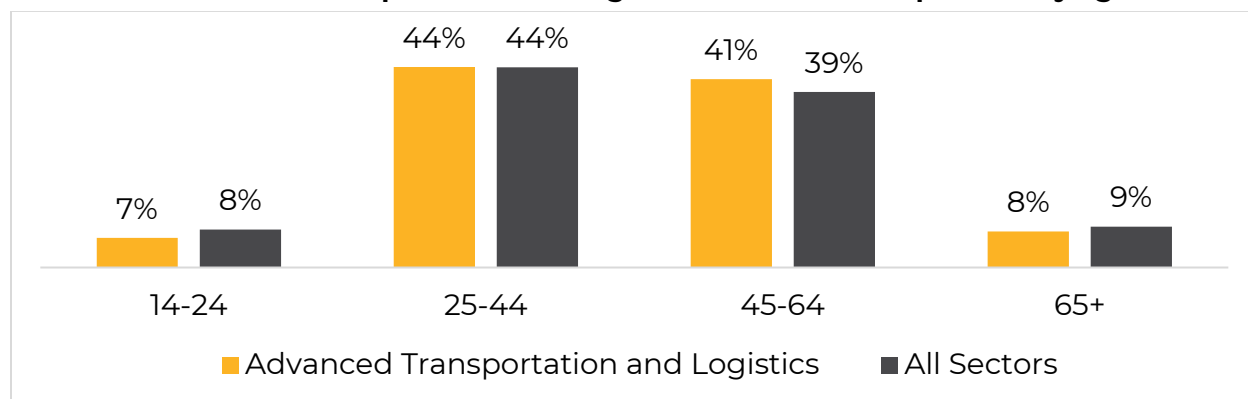


Exhibit 37. Advanced transportation and logistics workforce composition by age cohorts



Advanced Transportation and Logistics Demand

Exhibit 38 displays advanced transportation and logistics employment and occupational projections. There were nearly 49,300 middle-skill advanced transportation and logistics jobs in the CVML-S subregion in 2024. This occupational group is projected to add nearly 3,600 jobs through 2029, representing a 7% increase. There are more than 5,500 annual job openings projected for advanced transportation and logistics workers over this timeframe. Heavy and tractor-trailer truck drivers are projected to have the most annual job openings through 2029.

Exhibit 38. Advanced transportation and logistics employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Heavy and Tractor-Trailer Truck Drivers	25,212	27,218	2,006	8%	3,075
Automotive Service Technicians and Mechanics	5,022	5,241	219	4%	469
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	3,882	4,205	323	8%	461
First-Line Supervisors of Mechanics, Installers, and Repairers	3,531	3,761	230	7%	334
Bus and Truck Mechanics and Diesel Engine Specialists	2,335	2,504	169	7%	230
Transportation, Storage, and Distribution Managers	1,649	1,781	132	8%	163
Aircraft Mechanics and Service Technicians	1,725	1,796	71	4%	146
Logisticians	1,289	1,426	137	11%	140
Automotive Body and Related Repairers	992	1,037	45	5%	93
Bus Drivers, Transit and Intercity	544	620	76	14%	84
Commercial Pilots	475	511	36	8%	63
Cargo and Freight Agents	266	280	14	5%	28

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Avionics Technicians	283	302	20	7%	26
Railroad Conductors and Yardmasters	223	234	11	5%	22
Outdoor Power Equipment and Other Small Engine Mechanics	178	189	11	6%	21
Top Jobs Total	47,606	51,105	3,499	7%	5,355
<i>All other</i>	1,662	1,746	84	5%	180
Total	49,268	52,851	3,583	7%	5,536

Advanced Transportation and Logistics Hourly Earnings

Exhibit 39 displays the hourly earnings for the top middle-skill advanced transportation and logistics occupations in the CVML-S subregion. Avionics technicians have the highest entry-level hourly earnings in the advanced transportation and logistics occupational group at \$39.82 per hour.

Exhibit 39. Advanced transportation and logistics hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Avionics Technicians	\$39.82	\$45.41	\$50.79
Transportation, Storage, and Distribution Managers	\$36.19	\$45.48	\$59.92
Railroad Conductors and Yardmasters	\$32.37	\$32.47	\$35.88
Commercial Pilots	\$32.25	\$42.06	\$68.15
First-Line Supervisors of Mechanics, Installers, and Repairers	\$32.06	\$40.29	\$51.48
Logisticians	\$31.63	\$41.26	\$55.53
Aircraft Mechanics and Service Technicians	\$31.00	\$38.95	\$43.70
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	\$23.18	\$29.85	\$36.92
Bus and Truck Mechanics and Diesel Engine Specialists	\$21.96	\$29.69	\$35.36
Cargo and Freight Agents	\$20.90	\$24.07	\$30.08
Heavy and Tractor-Trailer Truck Drivers	\$19.95	\$26.13	\$30.39
Automotive Body and Related Repairers	\$19.19	\$27.80	\$32.76
Bus Drivers, Transit and Intercity	\$19.13	\$24.40	\$29.62
Automotive Service Technicians and Mechanics	\$18.17	\$24.24	\$31.88
Outdoor Power Equipment and Other Small Engine Mechanics	\$17.16	\$20.07	\$25.50

Exhibit 40 displays the average hourly earnings for the advanced transportation and logistics occupational group, categorized by percentile, compared to the regional living wage. The

average entry-level hourly earnings for the middle-skill occupational group is \$28.67 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top advanced transportation and logistics occupations was \$33.60 per hour over the last 12 months.

Exhibit 40. Average Advanced transportation and logistics hourly earnings in the subregion, 2024

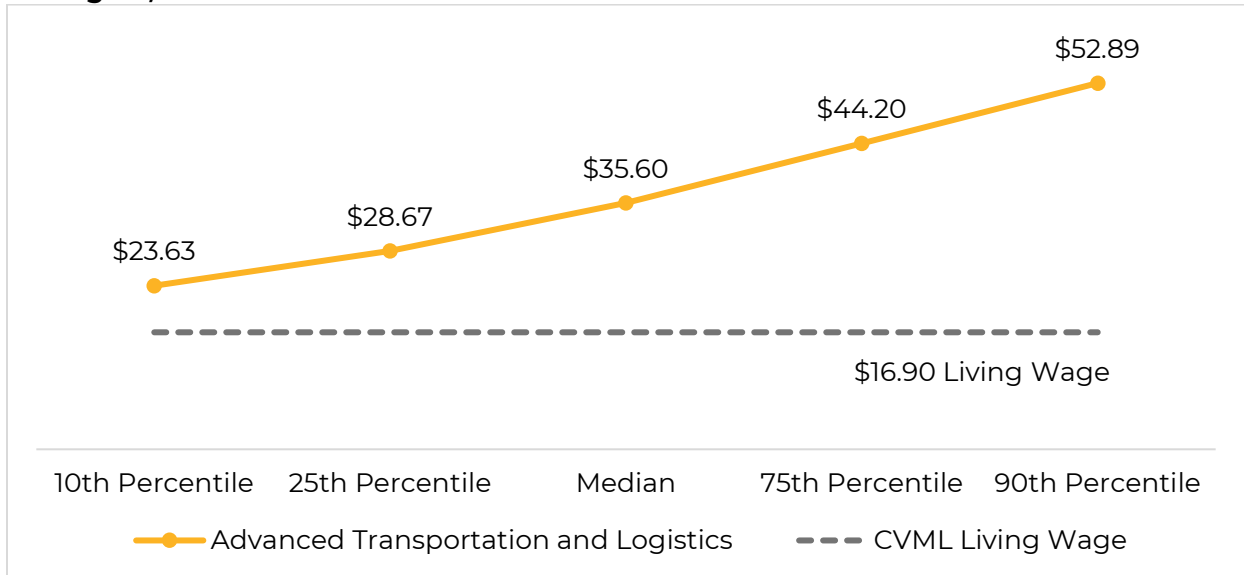


Exhibit 41 displays the certifications, specialized skills, and soft skills included in employer job ads for advanced transportation and logistics workers. Over the last 12 months, from February 2025 to January 2026, there were over 8,300 job advertisements posted for the top advanced transportation and logistics occupations detailed in this report. Nearly half of job advertisements were posted for heavy and tractor-trailer truck drivers, indicating that skills and certification information may be skewed toward those typically required for this occupation.

Exhibit 41. Top 10 certifications, specialized skills, and soft skills in job postings for advanced transportation and logistics occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License (CDL Class A, B & C)	Truck Driving	Communication
Automotive Service Excellence (ASE) Certification	Good Driving Record	Customer Service
Security Clearance	Lifting Ability	Operations
Airframe & Powerplant (A&P) Certificate	Warehousing	Management
Forklift Certification	Loading And Unloading	Leadership
Tanker Endorsement	Inventory Management	Troubleshooting (Problem Solving)
Hazmat Endorsement	Safety Standards	Detail Oriented
Passenger Endorsement	Forklift Truck	Planning
First Aid Certification	Pre-Trip And Post-Trip Vehicle Inspections	Sales

Certifications	Specialized Skills	Soft Skills
Tanker And Hazmat Combo X Endorsement	Vehicle Maintenance	Scheduling

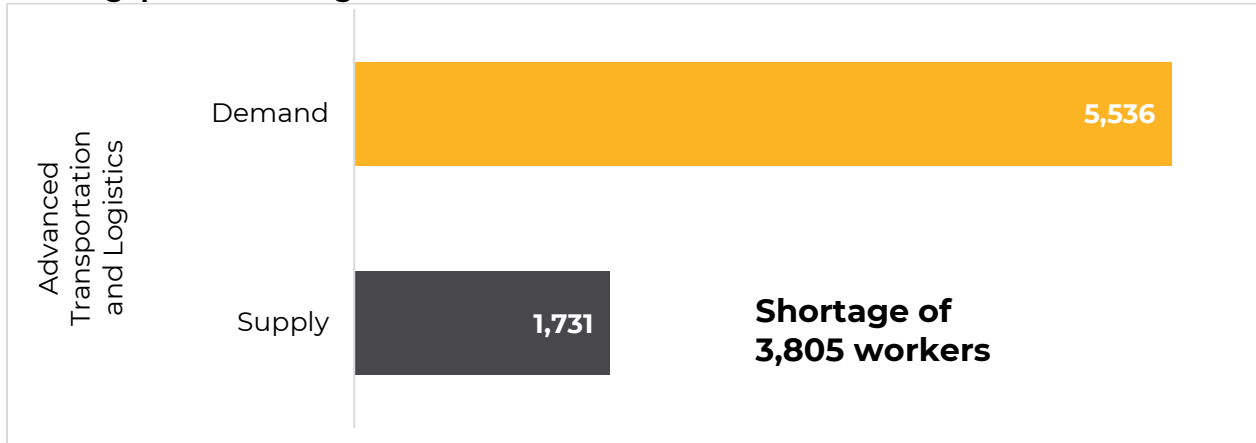
Exhibit 42 displays the community college advanced transportation and logistics programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 347 awards over the last three academic years from five colleges. Other postsecondary institutions issued 1,384 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 1,731 awards annually in advanced transportation and logistics programs. See the appendix to view award data by postsecondary institution.

Exhibit 42. Community college advanced transportation and logistics programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
051000 - Logistics and Materials Transportation	9	1
094700 - Diesel Technology	1	1
094730 - Heavy Equipment Operation	11	1
094750 - Truck and Bus Driving	2	1
094800 - Automotive Technology	277	4
094900 - Automotive Collision Repair	23	1
095010 - Aviation Airframe Mechanics	14	1
095020 - Aviation Powerplant Mechanics	10	1
302020 - Piloting	1	1
Total	347	-

Exhibit 43 compares annual employer demand for middle-skill workers in the advanced transportation and logistics sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 3,805 workers in the subregion's advanced transportation and logistics workforce.

Exhibit 43. Advanced transportation and logistics workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the advanced transportation and logistics sector. The following 10 advanced transportation and logistics program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 094720 - Heavy Equipment Maintenance
- 094740 - Railroad and Light Rail Operations
- 094830 - Motorcycle, Outboard and Small Engine Repair
- 094840 - Alternative Fuels and Advanced Transportation Technology
- 094850 - Recreational Vehicle Service
- 094910 - Upholstery Repair – Automotive
- 095900 - Marine Technology
- 302000 - Aviation and Airport Management and Services
- 302010 - Aviation and Airport Management
- 302030 - Air Traffic Control

Agriculture, Water & Environmental Technologies

Summary

- There were nearly 39,500 middle-skill agriculture, water, and environmental technologies jobs in the CVML-S subregion in 2024. This occupational group is projected to lose more than 200 jobs through 2029, representing a 0.6% decline. There are over 4,400 annual job openings projected for agriculture, water, and environmental technologies workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$20.97 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were nearly 3,300 job ads posted in the CVML-S subregion for the top agriculture, water, and environmental technologies occupations profiled in this report. The top job titles were veterinary assistant, ranch foreman, heavy equipment mechanic, and veterinary technician.
- Specialized skills: One of the top skills is project management, and the top certification is a Valid Driver's License (A, B, and C).

Agriculture, Water & Environmental Technologies Demographics

Comprising 29% of the middle-skill agriculture, water, and environmental technologies workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 54%. The agriculture, water, and environmental technologies workforce contains more White workers than the overall middle-skill workforce. Agriculture, water, and environmental technologies workers are slightly older than the rest of the middle-skill workforce, with approximately 59% of the workforce 45 years or older.

Exhibit 44. Gender composition of the agriculture, water, and environmental technologies workforce

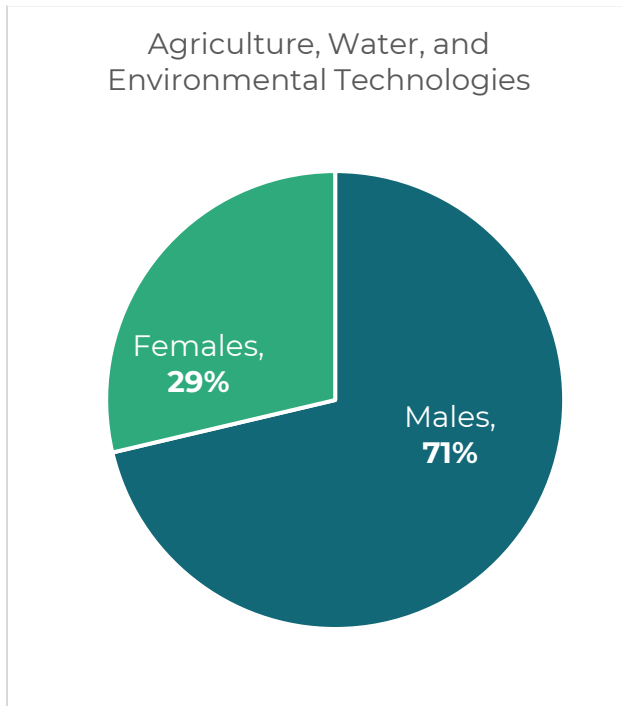


Exhibit 45. Race/ethnicity composition of the agriculture, water, and environmental technologies workforce

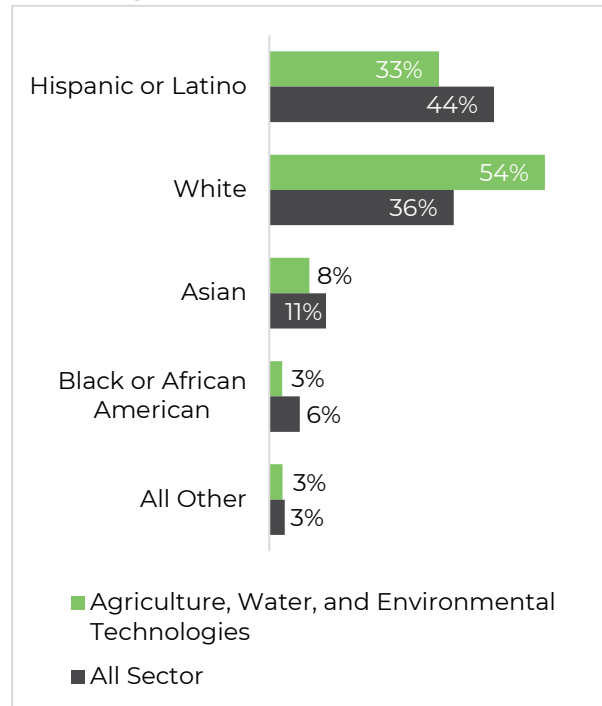
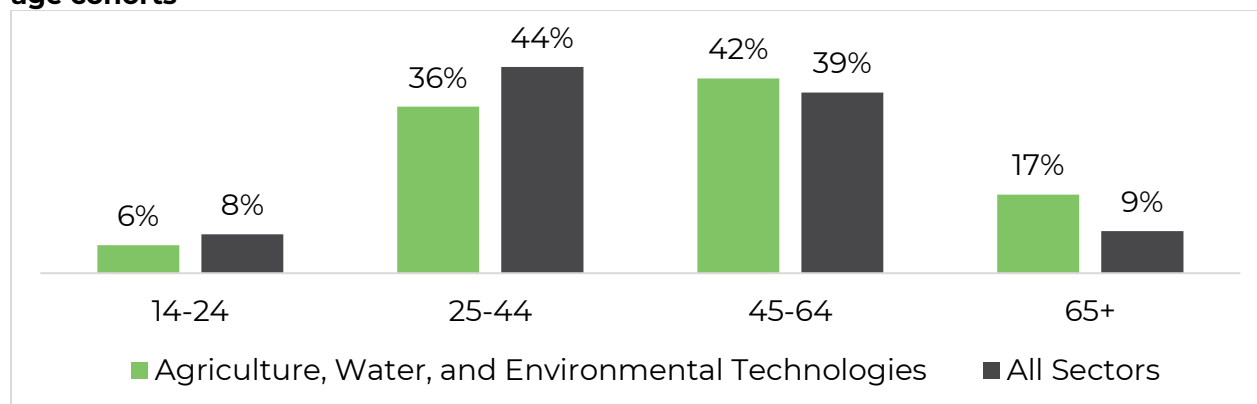


Exhibit 46. Agriculture, water, and environmental technologies workforce composition by age cohorts



Agriculture, Water & Environmental Technologies Demand

Exhibit 47 displays agriculture, water, and environmental technologies employment and occupational projections. There were nearly 39,500 middle-skill agriculture, water, and environmental technologies jobs in the CVML-S subregion in 2024. This occupational group is projected to decrease employment by more than 200 jobs through 2029, declining by 0.6%. There are over 4,400 annual job openings projected for agriculture, water, and environmental technologies workers over this timeframe. Farmers, ranchers, and other agricultural managers are projected to have the most annual job openings through 2029.

Exhibit 47. Agriculture, water & environmental technologies employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Farmers, Ranchers, and Other Agricultural Managers	15,392	14,402	(990)	(6%)	1,585
First-Line Supervisors of Farming, Fishing, and Forestry Workers	4,693	4,821	128	3%	677
Mobile Heavy Equipment Mechanics, Except Engines	1,806	1,894	88	5%	168
Farm Equipment Mechanics and Service Technicians	1,367	1,437	71	5%	128
Food Science Technicians	670	678	8	1%	100
Veterinary Assistants and Laboratory Animal Caretakers	505	546	40	8%	103
Forest and Conservation Technicians	818	809	(10)	(1%)	102
Animal Trainers	594	578	(16)	(3%)	84
Forest and Conservation Workers	310	310	0	0%	65
Veterinary Technologists and Technicians	482	530	48	10%	57
Pesticide Handlers, Sprayers, and Applicators, Vegetation	265	285	20	8%	42
Agricultural Inspectors	456	471	14	3%	77

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Environmental Science and Protection Technicians, Including Health	836	867	31	4%	99
Agricultural Technicians	422	419	(3)	(1%)	61
Hazardous Materials Removal Workers	399	413	14	3%	42
Top Jobs Total	29,016	28,460	(556)	(2%)	3,389
<i>All other</i>	<i>10,436</i>	<i>10,755</i>	<i>319</i>	<i>3%</i>	<i>1,020</i>
Total	39,453	39,215	(237)	(1%)	4,409

Agriculture, Water & Environmental Technologies Hourly Earnings

Exhibit 48 displays the hourly earnings for the top middle-skill agriculture, water, and environmental technologies occupations in the CVML-S subregion. Mobile heavy equipment mechanics, except engines have the highest entry-level hourly earnings in the agriculture, water, and environmental technologies occupational group at \$27.69 per hour.

Exhibit 48. Agriculture, water & environmental technologies hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Mobile Heavy Equipment Mechanics, Except Engines	\$27.69	\$32.77	\$37.89
Forest and Conservation Technicians	\$25.60	\$29.43	\$36.40
Agricultural Inspectors	\$21.29	\$26.72	\$35.45
Veterinary Technologists and Technicians	\$21.23	\$23.00	\$27.52
Hazardous Materials Removal Workers	\$20.84	\$26.05	\$34.68
Farm Equipment Mechanics and Service Technicians	\$19.57	\$22.69	\$29.43
Agricultural Technicians	\$18.94	\$23.22	\$27.02
Food Science Technicians	\$18.08	\$22.02	\$27.92
Pesticide Handlers, Sprayers, and Applicators, Vegetation	\$17.97	\$19.43	\$21.51
Veterinary Assistants and Laboratory Animal Caretakers	\$17.50	\$18.31	\$21.86
First-Line Supervisors of Farming, Fishing, and Forestry Workers	\$17.50	\$22.99	\$29.51
Environmental Science and Protection Technicians, Including Health	\$17.05	\$25.22	\$35.13
Animal Trainers	\$16.90	\$17.58	\$24.74
Forest and Conservation Workers	\$16.90	\$19.25	\$24.17
Farmers, Ranchers, and Other Agricultural Managers	\$16.90	\$18.59	\$32.71

Exhibit 49 displays the average hourly earnings for the agriculture, water, and environmental technologies occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$20.97 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top agriculture, water, and environmental technologies occupations was \$35.82 per hour over the last 12 months.

Exhibit 49. Average agriculture, water & environmental technologies hourly earnings in the subregion, 2024

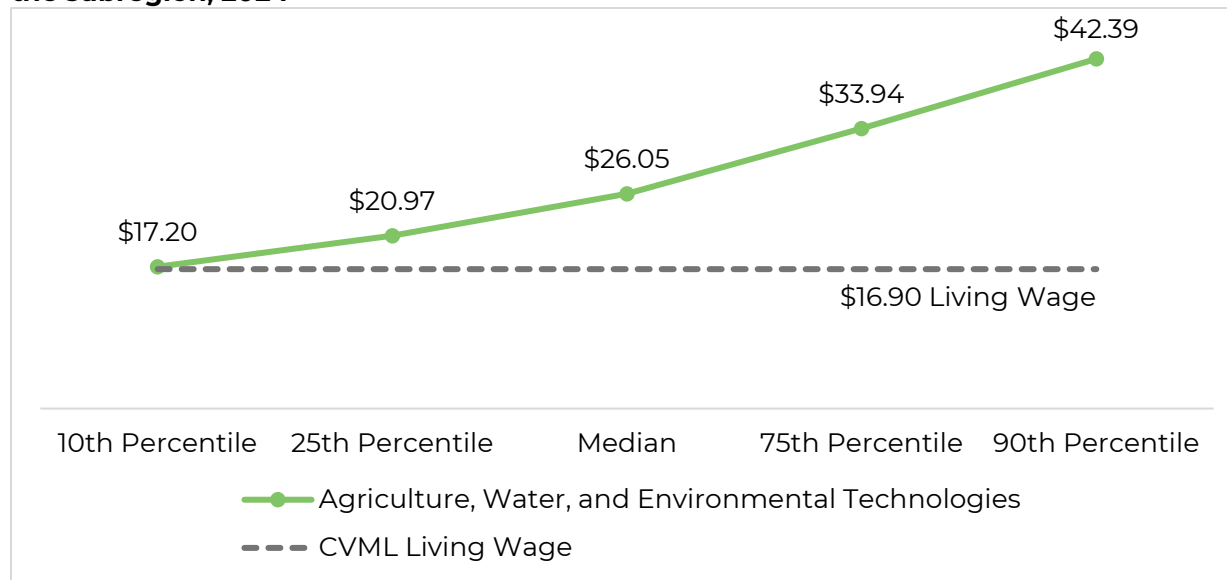


Exhibit 50 displays the certifications, specialized skills, and soft skills included in employer job ads for agriculture, water, and environmental technologies workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 3,300 job advertisements posted for the top agriculture, water, and environmental technologies occupations detailed in this report. Over 60% of job advertisements were posted for sales representatives and buyers and purchasing agents, indicating that skills and certification information may be skewed towards requirements for these occupations.

Exhibit 50. Top 10 certifications, specialized skills, and soft skills in job postings for agriculture, water & environmental technologies occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver’s License (CDL Class A, B & C)	Marketing	Sales
Certified Veterinary Technician	Construction	Communication
Registered Vascular Technologist (RVT)	Good Driving Record	Customer Service
Security Clearance	Project Management	Management
Automotive Service Excellence (ASE) Certification	Lifting Ability	Operations
Certified Professional Public Buyer	Procurement	Leadership
American Association For Laboratory Animal Science (AALAS) Certification	Heavy Equipment	Detail Oriented

Certifications	Specialized Skills	Soft Skills
Forklift Certification	Bilingual (Spanish/English)	Problem Solving
Assistant Laboratory Animal Technician	Agriculture	Negotiation
Certified Arborist	Effective Communication	Microsoft Office

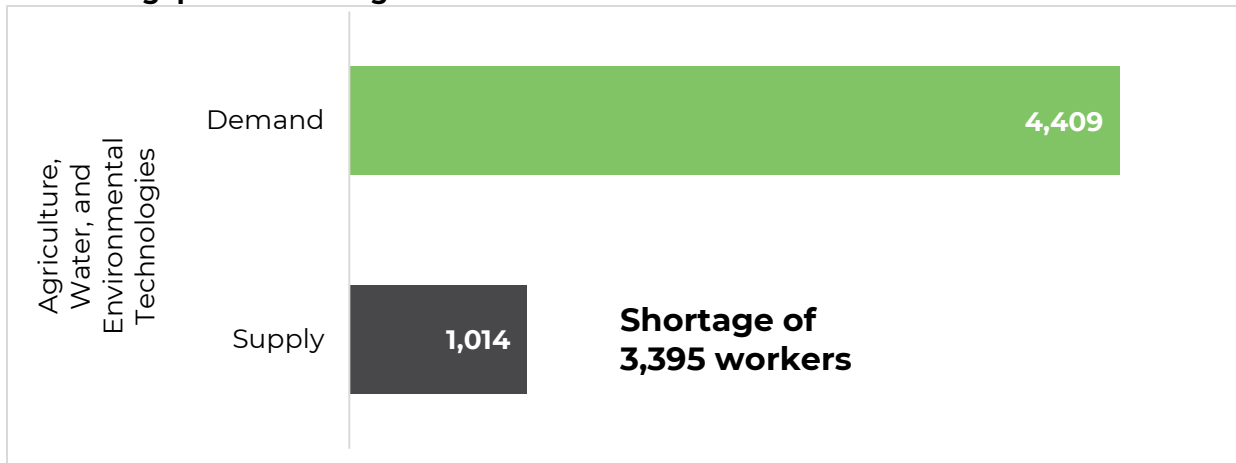
Exhibit 51 displays the community college agriculture, water, and environmental technologies programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 906 awards over the last three academic years from eight colleges. Other postsecondary institutions issued 108 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 1,014 awards annually in agriculture, water, and environmental technologies programs. See the appendix to view award data by postsecondary institution.

Exhibit 51. Community college agriculture, water, and environmental technologies programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
010100 - Agriculture Technology and Sciences, General	46	3
010200 - Animal Science	85	3
010230 - Dairy Science	2	1
010240 - Equine Science	9	2
010300 - Plant Science	175	5
010310 - Agricultural Pest Control Adviser and Operator (Licensed)	1	1
010400 - Viticulture, Enology, and Wine Business	0	1
010900 - Horticulture	7	3
010910 - Landscape Design and Maintenance	3	1
010920 - Floriculture /Floristry	0	1
011200 - Agriculture Business, Sales and Service	199	6
011300 - Food Processing and Related Technologies	7	3
011400 - Forestry	98	2
011500 - Natural Resources	37	2
011510 - Parks and Outdoor Recreation	7	1
011600 - Agricultural Power Equipment Technology	229	3
Total	906	-

Exhibit 52 compares annual employer demand for middle-skill workers in the agriculture, water, and environmental technologies sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 3,395 workers in the subregion’s agriculture, water, and environmental technologies workforce.

Exhibit 52. Agriculture, water & environmental technologies workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the agriculture, water, and environmental technologies sector. The following seven agriculture, water, and environmental technologies program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 010210 - Veterinary Technician (Licensed)
- 010220 - Artificial Inseminator
- 010930 - Nursery Technology
- 010940 - Turfgrass Technology
- 011520 - Wildlife and Fisheries
- 019900 - Other Agriculture and Natural Resources
- 30300 - Environmental Technology

Business & Entrepreneurship

Summary

- There were more than 68,900 middle-skill business and entrepreneurship jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,100 jobs through 2029, growing by 2%. There are nearly 2,500 annual job openings projected for business and entrepreneurship workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$21.90 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were 8,900 job ads posted in the CVML-S subregion for the top business and entrepreneurship occupations profiled in this report. The top job titles were customer service representatives, receptionists, and operations managers.
- Specialized skills: The top skill is accounting, and the top certification after a valid driver's license is a Property and Casualty Insurance License.

Business & Entrepreneurship Demographics

Comprising 35% of the middle-skill business and entrepreneurship workforce, men are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 46%. The business and entrepreneurship workforce contains more White workers than the overall middle-skill workforce. Business and entrepreneurship workers have a similar age distribution to the rest of the middle-skill workforce, although slightly older.

Exhibit 53. Gender composition of the business and entrepreneurship workforce

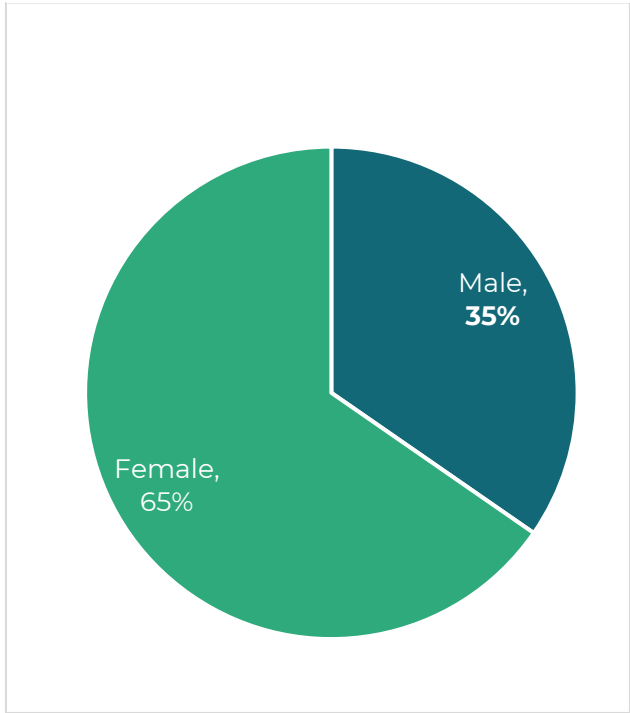


Exhibit 54. Race/ethnicity composition of the business and entrepreneurship workforce

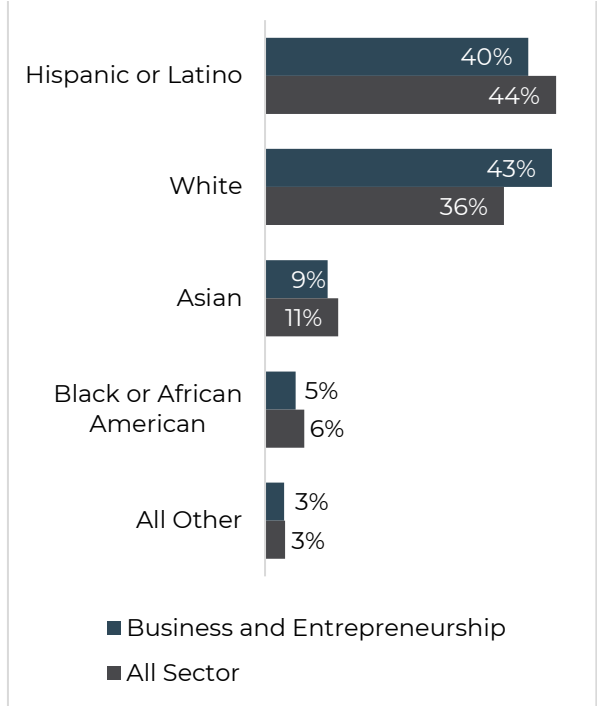
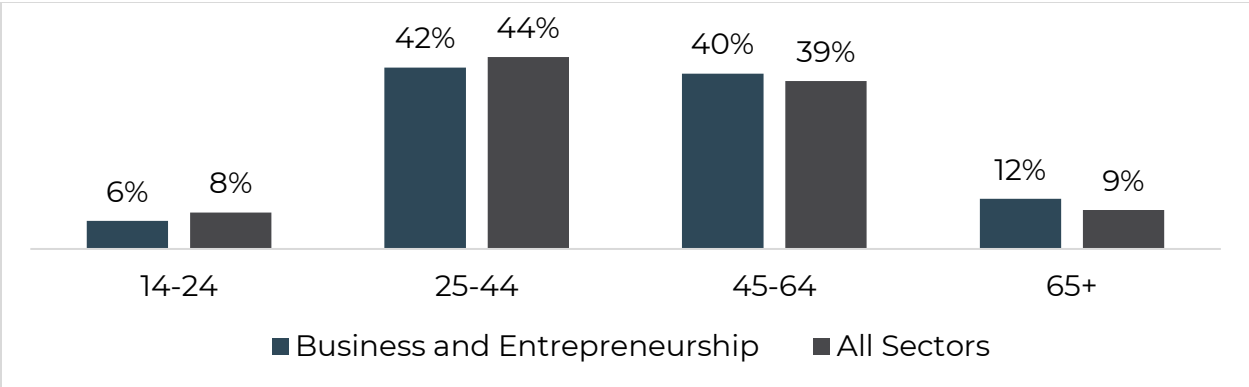


Exhibit 55. Business and entrepreneurship workforce composition by age cohorts



Business & Entrepreneurship Demand

Exhibit 56 displays business and entrepreneurship employment and occupational projections. There were more than 68,900 middle-skill business and entrepreneurship jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,100 jobs through 2029, growing by 2%. There are nearly 2,500 annual job openings projected for business and entrepreneurship workers over this timeframe. General and operations managers are projected to have the most annual job openings through 2029.

Exhibit 56. Business and entrepreneurship employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
General and Operations Managers	13,526	14,644	1,118	8%	1,350
Customer Service Representatives	8,912	9,075	163	2%	1,232
Bookkeeping, Accounting, and Auditing Clerks	10,076	10,128	51	1%	1,168
First-Line Supervisors of Office and Administrative Support Workers	8,666	8,808	142	2%	858
Receptionists and Information Clerks	4,737	5,037	299	6%	707
Production, Planning, and Expediting Clerks	2,424	2,571	147	6%	272
Insurance Sales Agents	2,741	2,759	18	1%	235
Real Estate Sales Agents	2,484	2,562	78	3%	222
Property, Real Estate, and Community Association Managers	2,254	2,277	23	1%	188
Payroll and Timekeeping Clerks	1,732	1,677	(56)	(3%)	178
Skincare Specialists	950	1,081	131	14%	167
Court, Municipal, and License Clerks	1,314	1,443	129	10%	161
Paralegals and Legal Assistants	1,454	1,483	29	2%	153
First-Line Supervisors of Non-Retail Sales Workers	1,619	1,701	82	5%	149

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Administrative Services Managers	1,563	1,663	101	6%	149
Top Jobs Total	64,453	18,873	909	1%	1,962
<i>All other</i>	4,462	4,678	215	5%	503
Total	68,915	23,551	1,124	2%	2,465

Business & Entrepreneurship Hourly Earnings

Exhibit 57 displays the hourly earnings for the top middle-skill business and entrepreneurship occupations in the CVML-S subregion. Administrative services managers have the highest entry-level hourly earnings in the business and entrepreneurship occupational group at \$38.70 per hour.

Exhibit 57. Business and entrepreneurship hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Administrative Services Managers	\$38.70	\$48.40	\$63.84
General and Operations Managers	\$34.71	\$48.54	\$74.68
First-Line Supervisors of Office and Administrative Support Workers	\$26.46	\$32.18	\$38.58
Paralegals and Legal Assistants	\$23.41	\$28.56	\$36.28
Court, Municipal, and License Clerks	\$23.39	\$26.29	\$30.65
Production, Planning, and Expediting Clerks	\$22.82	\$27.81	\$33.72
Property, Real Estate, and Community Association Managers	\$21.77	\$30.52	\$46.46
Payroll and Timekeeping Clerks	\$21.74	\$26.16	\$31.28
Bookkeeping, Accounting, and Auditing Clerks	\$21.05	\$24.42	\$29.28
First-Line Supervisors of Non-Retail Sales Workers	\$19.91	\$30.68	\$43.85
Real Estate Sales Agents	\$18.51	\$28.42	\$54.50
Insurance Sales Agents	\$18.44	\$26.44	\$45.04
Customer Service Representatives	\$18.32	\$21.20	\$25.66
Receptionists and Information Clerks	\$17.09	\$18.31	\$21.24
Skincare Specialists	\$16.90	\$17.29	\$22.72

Exhibit 58 displays the average hourly earnings for the business and entrepreneurship occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$21.90 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top business and entrepreneurship occupations was \$24.62 per hour over the last 12 months.

Exhibit 58. Business and entrepreneurship hourly earnings in the subregion, 2024

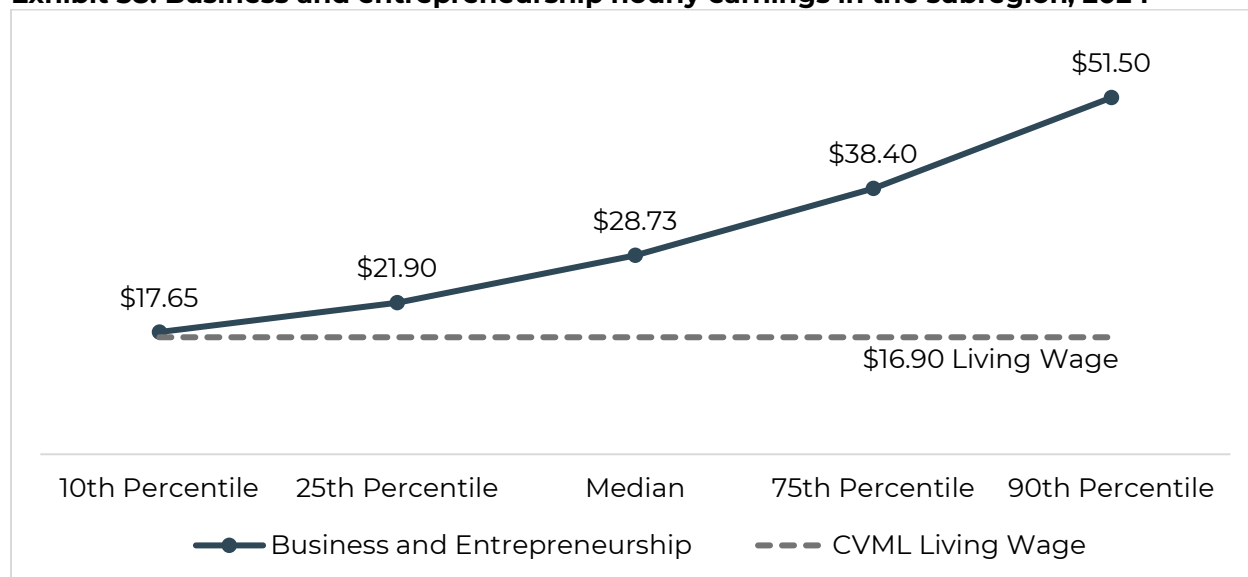


Exhibit 59 displays the certifications, specialized skills, and soft skills included in employer job ads for business and entrepreneurship workers. Over the last 12 months, from February 2025 to January 2026, there were 8,900 job advertisements posted for the top business and entrepreneurship occupations detailed in this report. Approximately 27% of employer job advertisements were posted for customer service representatives.

Exhibit 59. Top 10 certifications, specialized skills, and soft skills in job postings for business and entrepreneurship occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License (Class C)	Accounting	Customer Service
Property And Casualty Insurance License	Data Entry	Communication
Real Estate Salesperson License	Invoicing	Operations
Cardiopulmonary Resuscitation (CPR) Certification	Auditing	Sales
First Aid Certification	Marketing	Management
Master Of Business Administration (MBA)	Accounts Payable	Detail Oriented
Accredited Residential Manager	Accounts Receivable	Leadership
Basic Life Support (BLS) Certification	Financial Statements	Problem Solving
Certified Apartment Manager (CAM)	Billing	Multitasking
Security Clearance	Finance	Organizational Skills

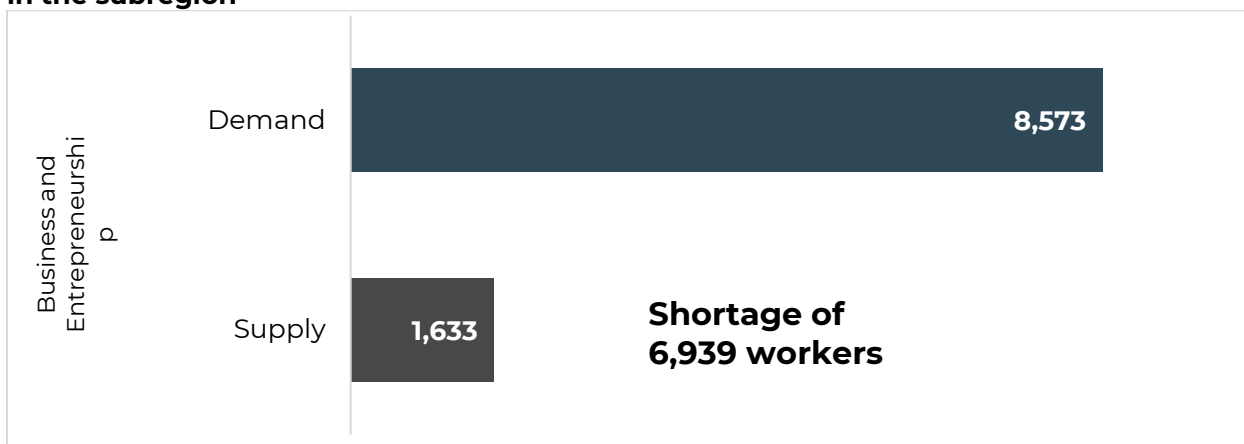
Exhibit 60 displays the community college business and entrepreneurship programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 1,530 awards over the last three academic years from 11 colleges. Other postsecondary institutions issued 103 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 1,633 awards annually in business and entrepreneurship programs. See the appendix to view award data by postsecondary institution.

Exhibit 60. Community college business and entrepreneurship programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
050100 - Business and Commerce, General	129	5
050200 - Accounting	153	9
050500 - Business Administration	1,043	11
050600 - Business Management	123	7
050630 - Management Development and Supervision	3	1
050640 - Small Business and Entrepreneurship	38	5
050900 - Marketing and Distribution	14	2
050940 - Sales and Salesmanship	4	1
051410 - Legal Office Technology	6	1
051800 - Customer Service	16	1
059900 - Other Business and Management	0	1
300700 - Cosmetology and Barbering	0	1
Total	1,530	-

Exhibit 61 compares annual employer demand for middle-skill workers in the business and entrepreneurship sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 6,939 workers in the subregion’s business and entrepreneurship workforce.

Exhibit 61. Business and entrepreneurship workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the business and entrepreneurship sector. The following 12 business and entrepreneurship program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 050210 - Tax Studies
- 050400 - Banking and Finance
- 050800 - International Business and Trade
- 050910 - Advertising
- 050920 - Purchasing
- 050970 - e-commerce (business emphasis)
- 051100 - Real Estate
- 051110 - Escrow
- 051200 - Insurance
- 125500 - Mortuary Science
- 126200 - Massage Therapy
- 300500 - Custodial Services



Education

Summary

- There were 29,000 middle-skill education jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,700 jobs through 2029, growing by 6%. There are nearly 4,400 annual job openings projected for education workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$20.03 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were nearly 1,500 job ads posted in the CVML-S subregion for the top education occupations profiled in this report. The top job titles were paraeducators, preschool teachers, and instructional aides.
- Specialized skills: The top skill is special education, and the top certification is Cardiopulmonary Resuscitation (CPR) Certification.

Education Demographics

Comprising 10% of the middle-skill education workforce, men are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 48%. The education workforce contains more Hispanic or Latino workers than the overall middle-skill workforce. Education workers have a similar age distribution to the rest of the middle-skill workforce, with a notable share of workers in the 14-24 age cohort at 14%.

Exhibit 62. Gender composition of the education workforce

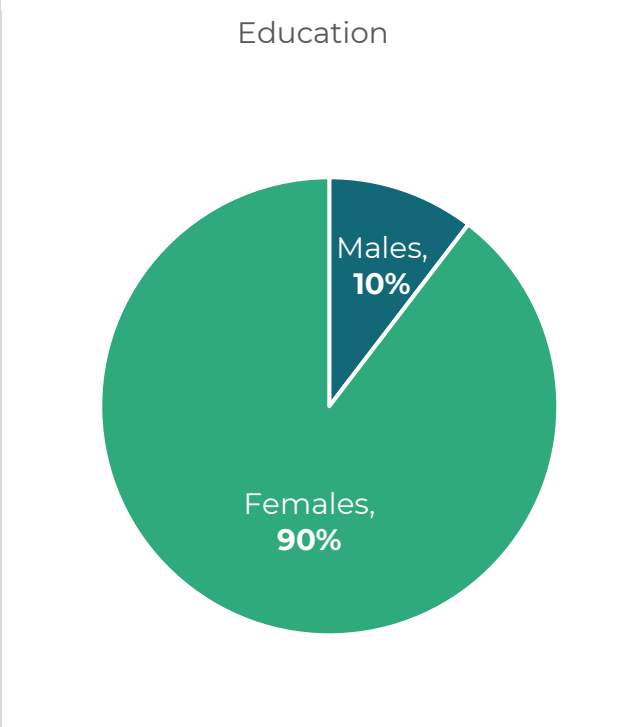


Exhibit 63. Race/ethnicity composition of the education workforce

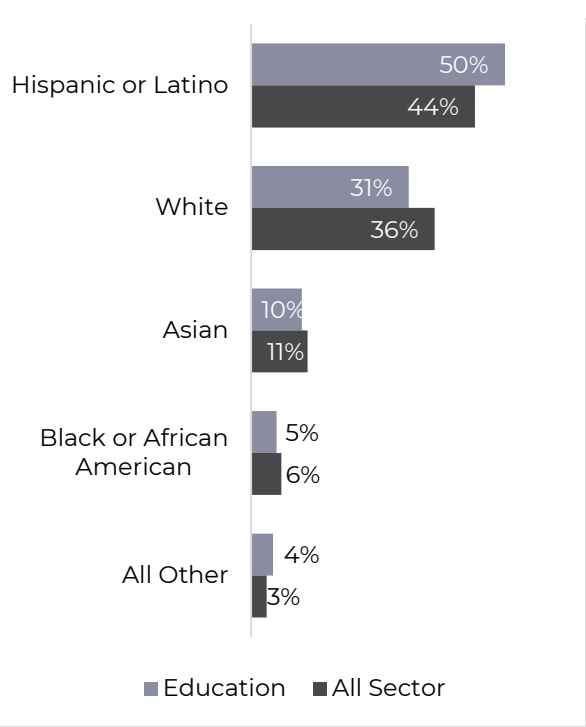
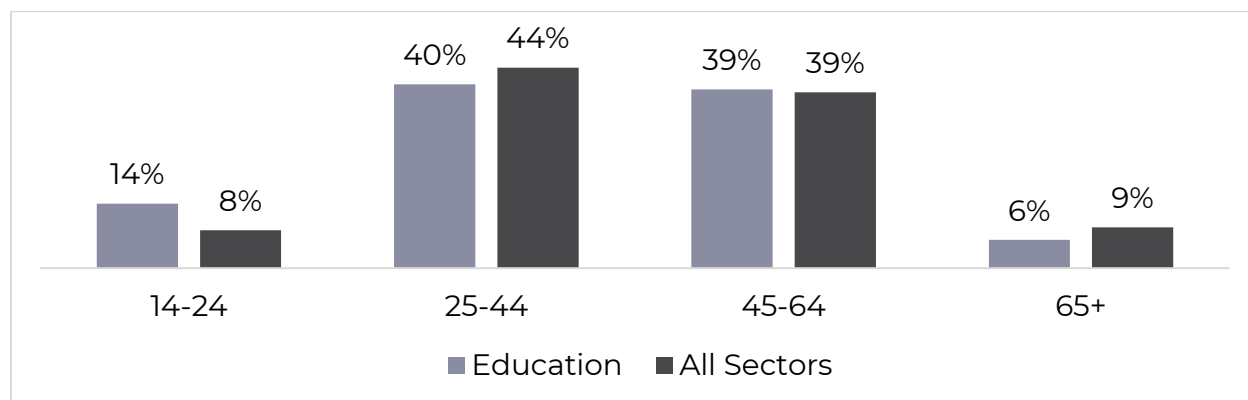


Exhibit 64. Education workforce composition by age cohorts



Education Demand

Exhibit 65 displays education employment and occupational projections. There were 29,000 middle-skill education jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,700 jobs through 2029, growing by 6%. There are nearly 4,400 annual job openings projected for education workers over this timeframe. Teaching assistants, except postsecondary are projected to have the most annual job openings through 2029.

Exhibit 65. Education employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Teaching Assistants, Except Postsecondary	13,219	14,513	1,294	10%	1,881
Childcare Workers	8,637	8,480	(157)	(2%)	1,510
Preschool Teachers, Except Special Education	3,409	3,740	331	10%	457
Teaching Assistants, Postsecondary	1,422	1,490	68	5%	184
Kindergarten Teachers, Except Special Education	1,324	1,443	119	9%	175
Library Technicians	564	589	25	4%	104
Interpreters and Translators	424	446	22	5%	45
Top Jobs Total	29,000	30,701	1,701	6%	4,357
<i>All other</i>	-	-	-	-	-
Total	29,000	30,701	1,701	6%	4,357

Education Hourly Earnings

Exhibit 66 displays the hourly earnings for the top middle-skill education occupations in the CVML-S subregion. Kindergarten teachers, except special education, have the highest entry-level hourly earnings in the education occupational group at \$29.61 per hour.

Exhibit 66. Education hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Kindergarten Teachers, Except Special Education	\$29.61	\$36.20	\$43.69
Interpreters and Translators	\$23.93	\$31.69	\$43.80
Library Technicians	\$19.31	\$22.56	\$25.32
Preschool Teachers, Except Special Education	\$17.54	\$20.29	\$25.22
Teaching Assistants, Except Postsecondary	\$17.27	\$18.70	\$21.96
Teaching Assistants, Postsecondary	\$17.11	\$17.78	\$18.56
Childcare Workers	\$16.90	\$16.90	\$20.32

Exhibit 67 displays the average hourly earnings for the education occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$20.03 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top education occupations was \$21.91 per hour over the last 12 months.

Exhibit 67. Average education hourly earnings in the subregion, 2024

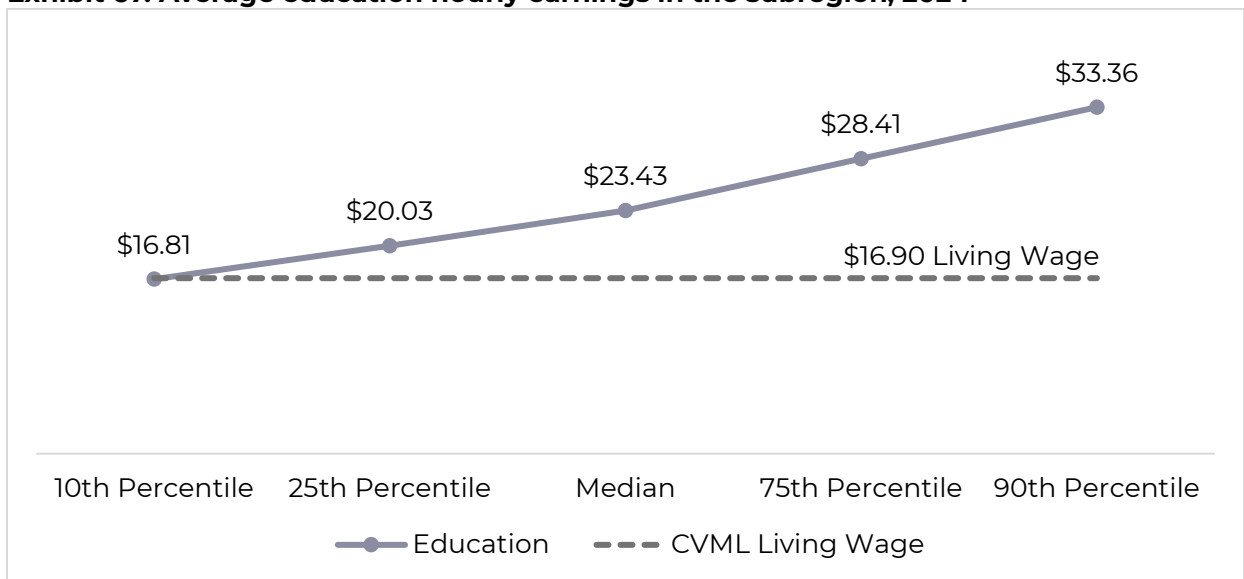


Exhibit 68 displays the certifications, specialized skills, and soft skills included in employer job ads for education workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 3,000 job advertisements posted for the top education occupations detailed in this report. More than 70% of job advertisements were posted for teaching assistants, except postsecondary, indicating that job ads may be skewed towards the skill and certifications typically required for this occupation.

Exhibit 68. Top 10 certifications, specialized skills, and soft skills in job postings for Education occupations

Certifications	Specialized Skills	Soft Skills
No Child Left Behind Act (NCLB) Standards	Special Education	Teaching
Cardiopulmonary Resuscitation (CPR) Certification	Preschool Education	Communication
First Aid Certification	Child Development	Clerical Works
Valid Driver's License (CDL Class C)	First Aid	English Language
American Red Cross (ARC) Certification	Lesson Planning	Writing
English Learner Authorization	Toileting	Mathematics
National Interpreter Certification (NIC)	Working With Children	Planning
Typing Certification	Adult Education	Multilingualism
Food Handler's Card	Early Childhood Education	Confidentiality
Registered Behavior Technician (RBT)	Office Equipment	Record Keeping

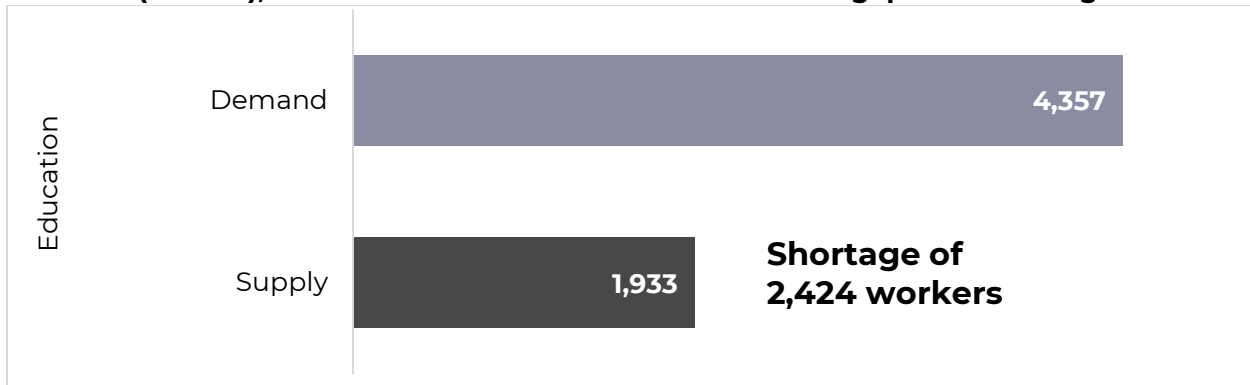
Exhibit 69 displays the community college education programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 1,933 awards over the last three academic years from four colleges. Other postsecondary institutions issued no awards in related programs annually over the last three academic years. See the appendix to view award data by postsecondary institution.

Exhibit 69. Community college education programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
080200 - Educational Aide (Teacher Assistant)	50	2
080900 - Special Education	4	3
085010 - Sign Language Interpreting	7	2
086000 - Educational Technology	64	1
089900 - Other Education	1	1
130500 - Child Development/Early Care and Education	1,673	11
130510 - Child and Adolescent Development	107	4
130520 - Children with Special Needs	11	6
130550 - The School Age Child	1	2
130570 - Foster and Kinship Care	0	1
130580 - Child Development Administration and Management	5	1
130590 - Infants and Toddlers	9	1
Total	1,933	-

Exhibit 70 compares annual employer demand for middle-skill workers in the education sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 2,424 workers in the subregion’s education workforce.

Exhibit 70. Education workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the education sector. The following six education program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 080210 - Educational Aide (Teacher Assistant), Bilingual
- 083560 - Coaching
- 083610 - Recreation Assistant
- 130540 - Preschool Age Child
- 130560 - Parenting and Family Education
- 130800 - Family Studies



Energy, Construction & Utilities

Summary

- There were more than 36,600 middle-skill energy, construction, and utilities jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,100 jobs through 2029, growing by 3%. There are more than 2,400 annual job openings projected for energy, construction, and utilities workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$27.80 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were over 2,100 job ads posted in the CVML-S subregion for the top energy, construction, and utilities occupations profiled in this report. The top job titles were electricians, solar technicians, and HVAC technicians.
- Specialized skills: The top skill is construction, and the top certification is a Valid Driver's License (CDL Class A & C).

Energy, Construction & Utilities Demographics

Comprising 5% of the middle-skill energy, construction, and utilities workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 54%. The energy, construction, and utilities workforce contains more Hispanic or Latino and White workers than the overall middle-skill workforce. Energy, construction, and utilities workers have a similar age distribution to the rest of the middle-skill workforce, although slightly younger.

Exhibit 71. Gender composition of the energy, construction, and utilities workforce

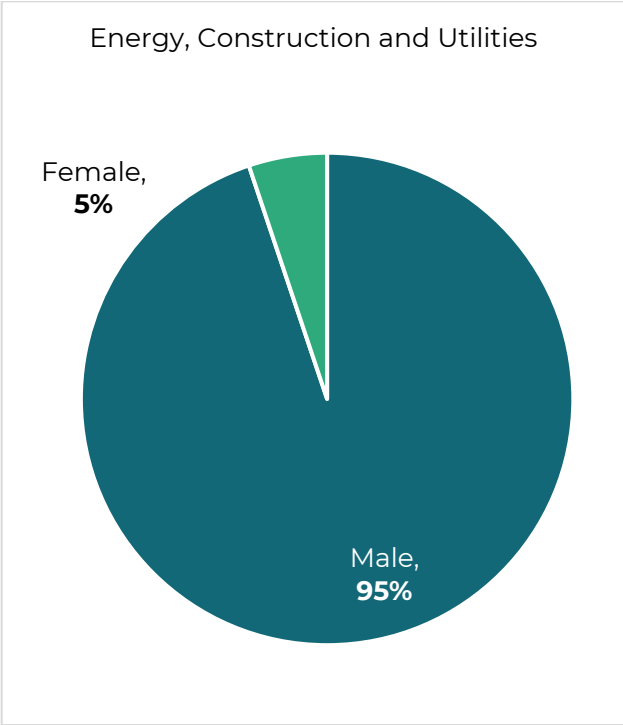


Exhibit 72. Race/ethnicity composition of the energy, construction, and utilities workforce

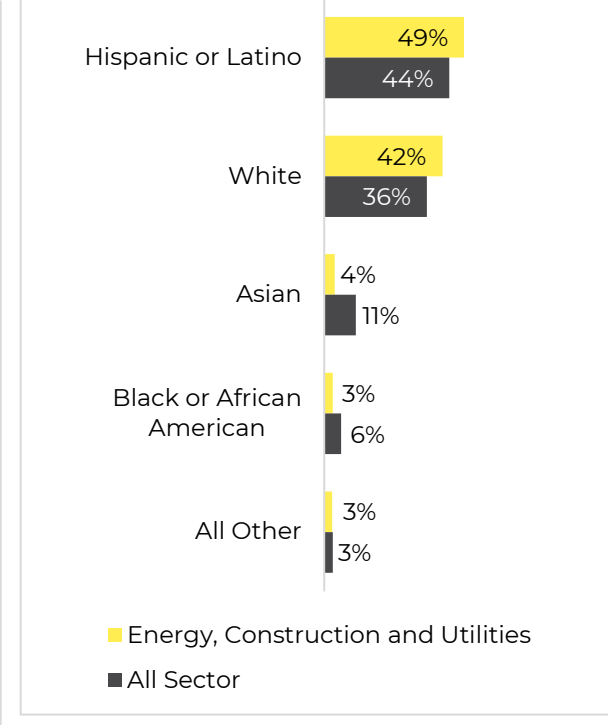
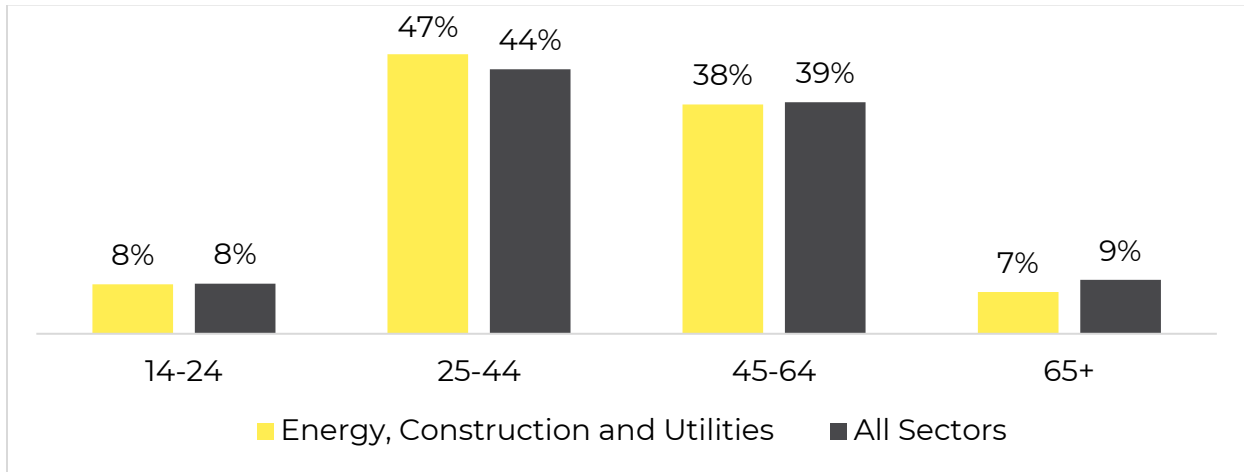


Exhibit 73. Energy, construction, and utilities workforce composition by age cohorts



Energy, Construction & Utilities Demand

Exhibit 74 displays energy, construction, and utilities employment and occupational projections. There were more than 36,600 middle-skill energy, construction, and utilities jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 1,100 jobs through 2029, growing by 3%. There are more than 2,400 annual job openings projected for energy, construction, and utilities workers over this timeframe. Electricians are projected to have the most annual job openings through 2029.

Exhibit 74. Energy, construction, and utilities employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Electricians	4,578	5,295	716	16%	572
Carpenters	5,950	6,104	154	3%	504
First-Line Supervisors of Construction Trades and Extraction Workers	4,747	5,017	270	6%	432
Plumbers, Pipefitters, and Steamfitters	2,866	3,130	264	9%	305
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2,789	3,086	298	11%	303
Operating Engineers and Other Construction Equipment Operators	3,004	3,177	173	6%	294
Installation, Maintenance, and Repair Workers, All Other	2,023	2,098	75	4%	213
Water and Wastewater Treatment Plant and System Operators	1,204	1,259	55	5%	124
Solar Photovoltaic Installers	807	951	144	18%	110
Construction and Building Inspectors	793	835	42	5%	94

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Telecommunications Equipment Installers and Repairers, Except Line Installers	892	903	11	1%	89
Electrical Power-Line Installers and Repairers	774	793	18	2%	68
Sheet Metal Workers	571	610	39	7%	61
Civil Engineering Technologists and Technicians	525	555	30	6%	51
Architectural and Civil Drafters	526	533	7	1%	46
Top Jobs Total	32,050	18,873	909	3%	1,962
<i>All other</i>	<i>4,579</i>	<i>4,785</i>	<i>207</i>	<i>5%</i>	<i>474</i>
Total	36,629	23,659	1,115	3%	2,436

Energy, Construction & Utilities Hourly Earnings

Exhibit 75 displays the hourly earnings for the top middle-skill energy, construction, and utilities occupations in the CVML-S subregion. Electrical power-line installers and repairers have the highest entry-level hourly earnings in the energy, construction, and utilities occupational group at \$47.18 per hour.

Exhibit 75. Energy, construction, and utilities hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Electrical Power-Line Installers and Repairers	\$47.18	\$59.23	\$69.07
First-Line Supervisors of Construction Trades and Extraction Workers	\$31.71	\$40.35	\$50.87
Telecommunications Equipment Installers and Repairers, Except Line Installers	\$29.62	\$33.65	\$42.51
Operating Engineers and Other Construction Equipment Operators	\$28.47	\$36.94	\$55.36
Civil Engineering Technologists and Technicians	\$28.44	\$34.58	\$39.46
Construction and Building Inspectors	\$27.10	\$36.56	\$48.89
Sheet Metal Workers	\$25.81	\$36.04	\$49.20
Water and Wastewater Treatment Plant and System Operators	\$25.63	\$31.71	\$39.88
Architectural and Civil Drafters	\$24.64	\$30.10	\$36.63
Electricians	\$24.50	\$33.66	\$44.98
Plumbers, Pipefitters, and Steamfitters	\$23.84	\$30.83	\$43.46
Solar Photovoltaic Installers	\$23.34	\$26.61	\$30.41
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$22.86	\$28.50	\$36.08
Carpenters	\$21.63	\$27.66	\$38.92

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Installation, Maintenance, and Repair Workers, All Other	\$18.82	\$22.26	\$28.84

Exhibit 76 displays the average hourly earnings for the energy, construction, and utilities occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$27.80 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top energy, construction, and utilities occupations was \$33.11 per hour over the last 12 months.

Exhibit 76. Average energy, construction, and utilities hourly earnings in the subregion

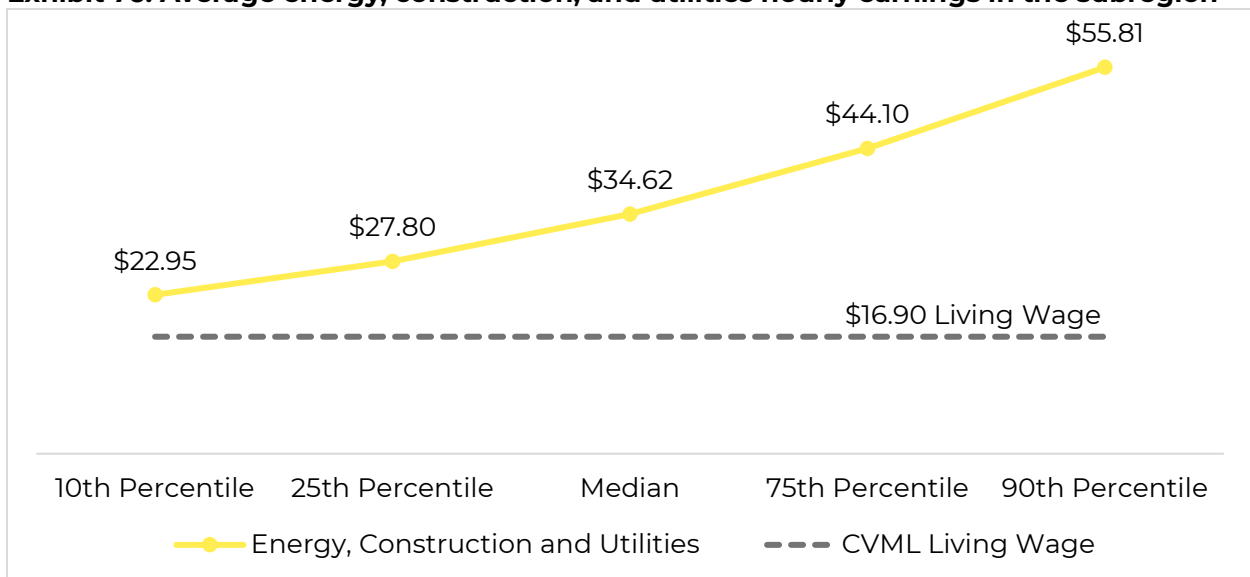


Exhibit 77 displays the certifications, specialized skills, and soft skills included in employer job ads for energy, construction, and utilities workers. Over the last 12 months, from February 2025 to January 2026, there were more than 3,600 job advertisements posted for the top energy, construction, and utilities occupations detailed in this report. Over 20% of job advertisements were posted for electricians.

Exhibit 77. Top 10 certifications, specialized skills, and soft skills in job postings for energy, construction, and utilities occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License (CDL Class A, B & C)	Construction	Communication
EPA 608 Technician Certification	Good Driving Record	Troubleshooting (Problem Solving)
10-Hour OSHA General Industry Card	HVAC	Operations
Cardiopulmonary Resuscitation (CPR) Certification	Lifting Ability	Customer Service
30-Hour OSHA General Industry Card	Electrical Wiring	Management
First Aid Certification	Electrical Systems	Detail Oriented

Certifications	Specialized Skills	Soft Skills
EPA Universal Certification	Blueprinting	English Language
Journeyman Electrician	Hand Tools	Leadership
NABCEP Certified Energy Practitioner	Plumbing	Writing
Journeyman Lineman	Power Tool Operation	Professionalism

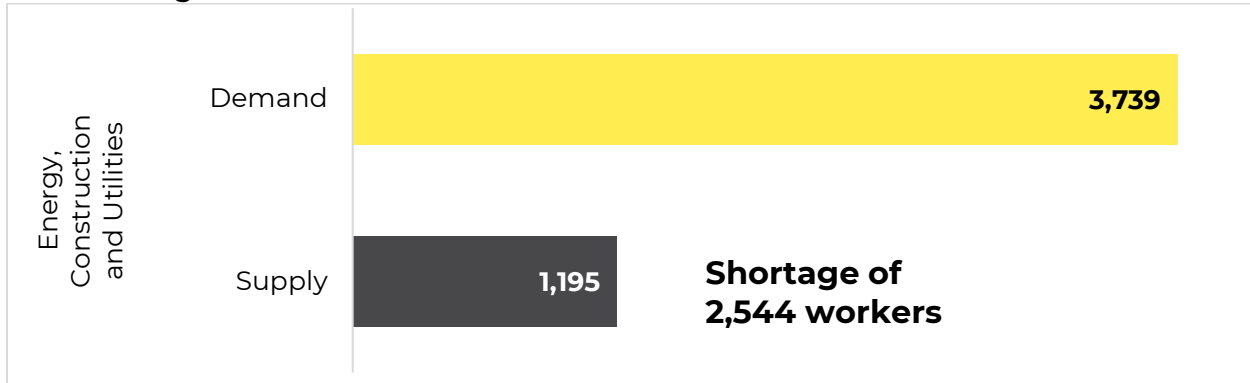
Exhibit 78 displays the community college energy, construction, and utilities programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 467 awards over the last three academic years from five colleges. Other postsecondary institutions issued 701 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 1,195 awards annually in energy, construction, and utilities programs. See the appendix to view award data by postsecondary institution.

Exhibit 78. Community college energy, construction, and utilities programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
020100 - Architecture and Architectural Technology	62	3
093440 - Electrical Systems and Power Transmission	9	1
093500 - Electro-Mechanical Technology	83	2
094600 - Environmental Control Technology (HVAC)	97	4
095200 - Construction Crafts Technology	67	3
095220 - Electrical	80	2
095230 - Plumbing, Pipefitting and Steamfitting	9	1
095250 - Mill and Cabinet Work	1	1
095300 - Drafting Technology	27	2
095640 - Sheet Metal and Structural Metal	12	1
095700 - Civil and Construction Management Technology	7	1
095720 - Construction Inspection	3	1
095800 - Water and Wastewater Technology	8	2
Total	467	-

Exhibit 79 compares annual employer demand for middle-skill workers in the energy, construction, and utilities sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 2,544 workers in the subregion’s energy, construction, and utilities workforce.

Exhibit 79. Energy, construction, and utilities workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the energy, construction, and utilities sector. The following 11 energy, construction, and utilities program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 029900 - Other Architecture and Environmental Design
- 094610 - Energy Systems Technology
- 095210 – Carpentry
- 095240 – Glazing
- 095260 - Masonry, Tile, Cement, Lath and Plaster
- 095270 - Painting, Decorating, and Flooring
- 095280 - Drywall and Insulation
- 095290 – Roofing
- 095310 - Architectural Drafting
- 095320 - Civil Drafting
- 210210 - Public Works



Health

Summary

- There were nearly 135,600 middle-skill health jobs in the CVML-S subregion in 2024. This occupational group is projected to add nearly 2,200 jobs through 2029, growing by 2%. There are over 3,300 annual job openings projected for health workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$25.91 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were more than 20,600 job ads posted in the CVML-S subregion for the top health occupations profiled in this report. The top job titles were registered nurses, licensed vocational nurses, and medical assistants.
- Specialized skills: The top skill is nursing care, and the top certification is registered nurse (RN).

Health Demographics

Comprising 20% of the middle-skill health workforce, men are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 48%. The health workforce contains more Hispanic or Latino, Asian American, and Black or African American workers than the overall middle-skill workforce. Health workers are, on average, younger than the rest of the middle-skill workforce.

Exhibit 80. Gender composition of the health workforce

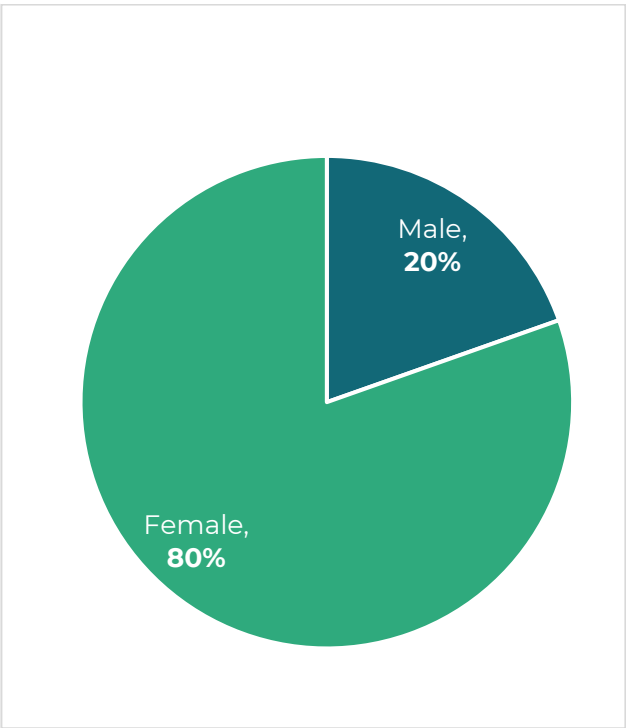


Exhibit 81. Race/ethnicity composition of the health workforce

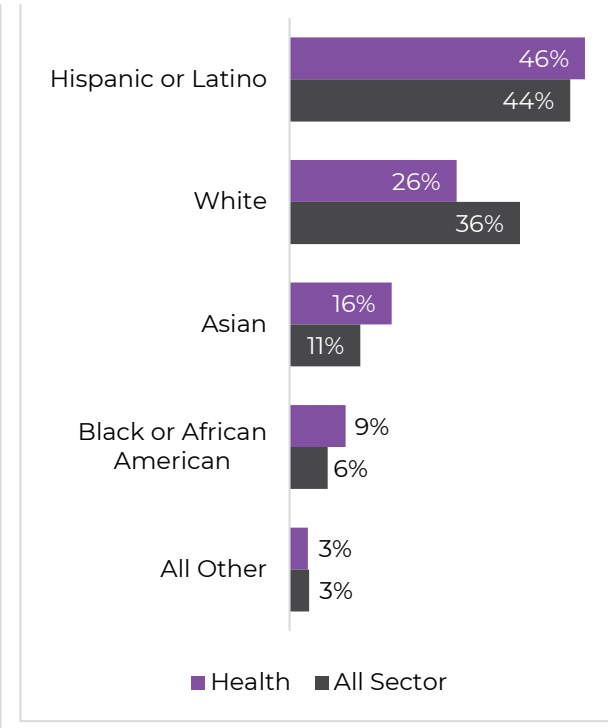
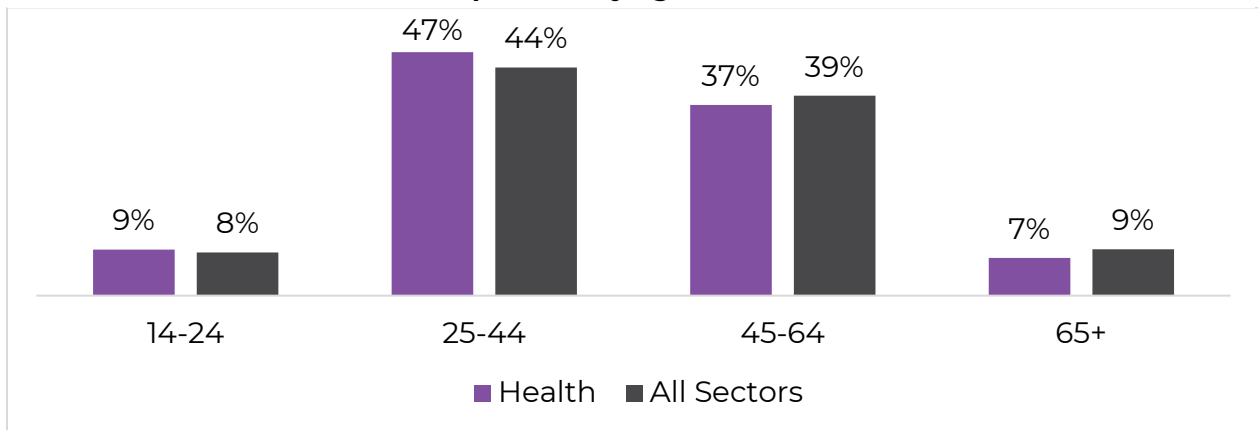


Exhibit 82. Health workforce composition by age cohorts



Health Demand

Exhibit 83 displays health employment and occupational projections. There were nearly 135,600 middle-skill health jobs in the CVML-S subregion in 2024. This occupational group is projected to add nearly 2,200 jobs through 2029, growing by 2%. There are over 3,300 annual job openings projected for health workers over this timeframe. Home and health and personal aide workers are projected to have the most annual job openings through 2029.

Exhibit 83. Health employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Home Health and Personal Care Aides	58,309	71,352	13,043	22%	12,050
Registered Nurses	19,973	21,722	1,749	9%	1,418
Medical Assistants	8,048	8,987	939	12%	1,274
Nursing Assistants	6,944	7,627	683	10%	1,156
Medical Secretaries and Administrative Assistants	6,069	6,507	438	7%	711
Social and Human Service Assistants	4,274	4,807	534	12%	560
Licensed Practical and Licensed Vocational Nurses	5,050	5,421	371	7%	488
Dental Assistants	3,066	3,277	211	7%	461
Pharmacy Technicians	3,109	3,293	184	6%	332
Massage Therapists	1,231	1,451	219	18%	212
Health Technologists and Technicians, All Other	1,765	1,983	218	12%	177
Healthcare Support Workers, All Other	1,116	1,183	67	6%	164
Emergency Medical Technicians	1,214	1,369	155	13%	127
Phlebotomists	809	869	59	7%	118

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Clinical Laboratory Technologists and Technicians	1,191	1,314	123	10%	103
Top Jobs Total	122,169	18,873	909	1%	1,962
<i>All other</i>	<i>13,411</i>	<i>14,655</i>	<i>1,244</i>	<i>9%</i>	<i>1,385</i>
Total	135,580	33,529	2,153	2%	3,347

Health Hourly Earnings

Exhibit 84 displays the hourly earnings for the top middle-skill health occupations in the CVML-S subregion. Registered nurses have the highest entry-level hourly earnings in the health occupational group at \$49.40 per hour.

Exhibit 84. Health hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Registered Nurses	\$49.40	\$59.70	\$69.54
Licensed Practical and Licensed Vocational Nurses	\$30.63	\$35.33	\$37.46
Clinical Laboratory Technologists and Technicians	\$23.35	\$28.65	\$36.51
Health Technologists and Technicians, All Other	\$22.36	\$24.26	\$29.43
Dental Assistants	\$21.99	\$22.79	\$28.28
Phlebotomists	\$21.19	\$23.03	\$26.57
Social and Human Service Assistants	\$20.94	\$22.51	\$27.24
Healthcare Support Workers, All Other	\$20.45	\$22.34	\$27.59
Pharmacy Technicians	\$19.80	\$23.04	\$28.33
Medical Secretaries and Administrative Assistants	\$18.92	\$22.18	\$26.24
Nursing Assistants	\$18.83	\$20.82	\$22.02
Medical Assistants	\$18.31	\$21.48	\$23.51
Emergency Medical Technicians	\$17.88	\$18.92	\$22.91
Home Health and Personal Care Aides	\$16.90	\$16.90	\$16.90
Massage Therapists	\$16.90	\$21.17	\$34.10

Exhibit 85 displays the average hourly earnings for the health occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$25.91 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top health occupations was \$31.02 per hour over the last 12 months.

Exhibit 85. Average health hourly earnings in the subregion

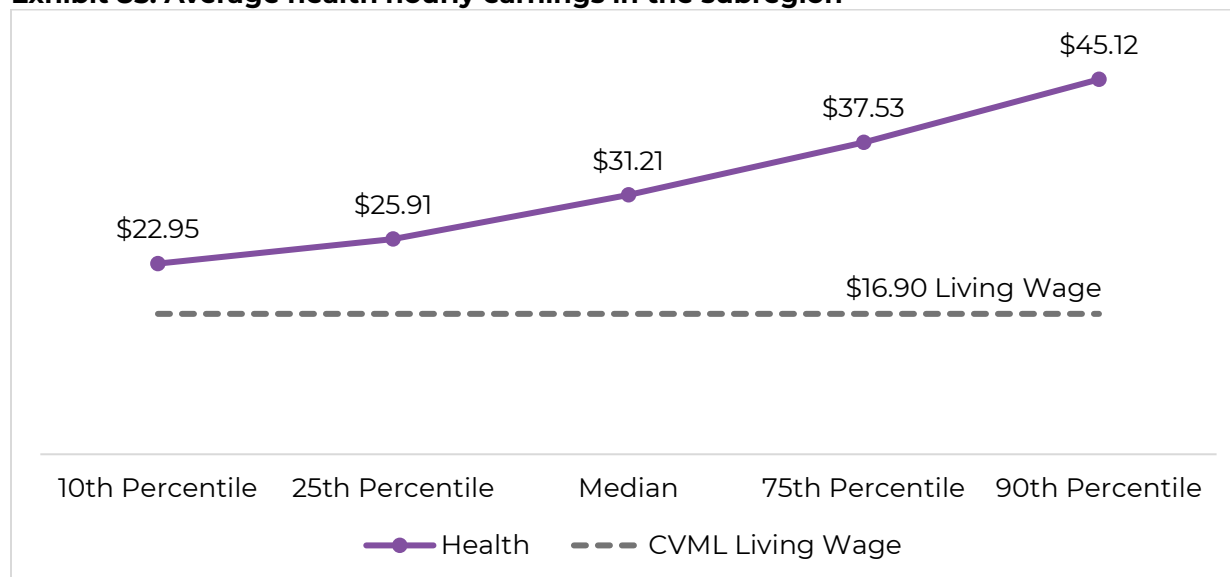


Exhibit 86 displays the certifications, specialized skills, and soft skills included in employer job ads for health workers. Over the last 12 months, from February 2025 to January 2026, there were more than 20,600 job advertisements posted for the top health occupations detailed in this report. Nearly 60% of job advertisements were posted for registered nurses and home health and personal care aides, indicating that the skills and certification information may be skewed towards requirements for these occupations.

Exhibit 86. Top 10 certifications, specialized skills, and soft skills in job postings for health occupations

Certifications	Specialized Skills	Soft Skills
Registered Nurse (RN)	Nursing Care	Communication
Basic Life Support (BLS) Certification	Cardiopulmonary Resuscitation (CPR)	Leadership
Advanced Cardiovascular Life Support (ACLS) Certification	Medication Administration	Customer Service
Valid Driver's License	Medical Records	Management
Cardiopulmonary Resuscitation (CPR) Certification	Vital Signs	Coordinating
Licensed Vocational Nurse (LVN)	Infection Control	Planning
Certified Nursing Assistant (CNA)	Nursing Process	Operations
Pediatric Advanced Life Support (PALS)	Home Health Care	Confidentiality
Licensed Practical Nurse (LPN)	Medical Assistance	English Language
First Aid Certification	Pediatrics	Problem Solving

Exhibit 87 displays the community college health programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 2,089 awards over the last three academic years from 11 colleges. Other postsecondary institutions issued 2,940 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 5,029

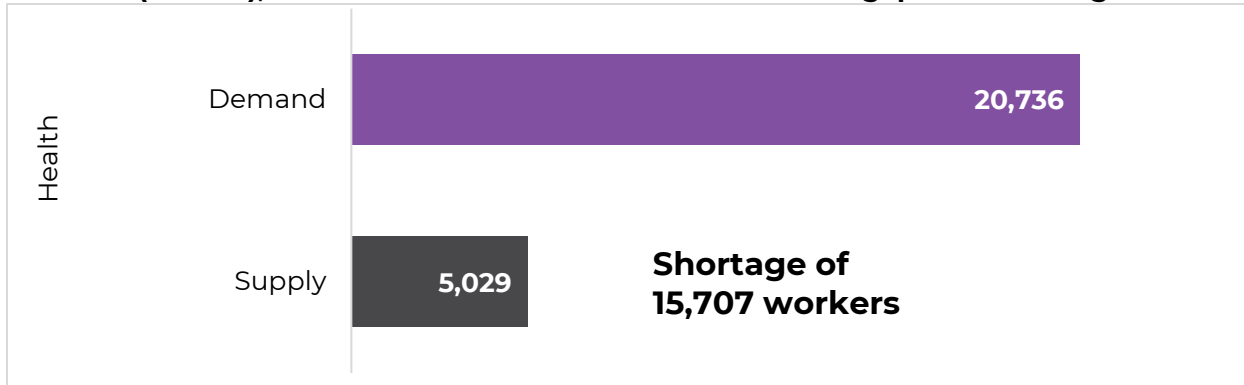
awards annually in health programs. See the appendix to view award data by postsecondary institution.

Exhibit 87. Community college health programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
051420 - Medical Office Technology	52	3
095500 - Laboratory Science Technology	1	1
120100 - Health Occupations, General	112	3
120200 - Hospital and Health Care Administration	2	1
120800 - Medical Assisting	11	1
120810 - Clinical Medical Assisting	142	2
120820 - Administrative Medical Assisting	24	1
121000 - Respiratory Care/Therapy	20	1
121800 - Occupational Therapy Technology	14	1
122000 - Speech-Language Pathology and Audiology	21	2
122100 - Pharmacy Technology	15	1
122200 - Physical Therapist Assistant	28	2
122300 - Health Information Technology	15	2
122310 - Health Information Coding	10	1
122500 - Radiologic Technology	51	2
122800 - Athletic Training and Sports Medicine	5	1
123010 - Registered Nursing	539	6
123020 - Licensed Vocational Nursing	81	4
123030 - Certified Nurse Assistant	70	2
123900 - Psychiatric Technician	44	2
124010 - Dental Assistant	46	2
124020 - Dental Hygienist	39	2
Total	2,089	-

Exhibit 88 compares annual employer demand for middle-skill workers in the health sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 15,707 workers in the subregion’s health workforce.

Exhibit 88. Health workforce demand (annual job openings), postsecondary supply of students (awards), and additional students needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the health sector. The following 21 health program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 120500 - Medical Laboratory Technology
- 120510 - Phlebotomy
- 120600 - Physician Assistant
- 120830 - Health Facility Unit Coordinator
- 120900 - Hospital Central Service Technician
- 121100 - Polysomnography
- 121200 - Electro-Neurodiagnostic Technology
- 121300 - Cardiovascular Technician
- 121400 - Orthopedic Assistant
- 121500 - Electrocardiography
- 121700 - Surgical Technician
- 121900 - Optical Technology
- 122400 - School Health Clerk
- 122600 - Radiation Therapy Technician
- 122700 - Diagnostic Medical Sonography
- 123000 – Nursing
- 123080 - Home Health Aide
- 124000 - Dental Occupations
- 124030 - Dental Laboratory Technician
- 129900 - Other Health Occupations
- 130660 - Dietetic Technology

ICT/Digital Media

Summary

- There were nearly 39,500 middle-skill ICT/digital media jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 900 jobs through 2029, growing by 2%. There are more than 2,000 annual job openings projected for ICT/digital media workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$23.47 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were over 3,800 job ads posted in the CVML-S subregion for the top ICT/digital media occupations profiled in this report. The top job titles were administrative assistant, office assistant, systems administrator, and photographer.
- Specialized skills: The top skill is administrative support, and the top certification is a valid driver's license.

ICT/Digital Media Demographics

Comprising 23% of the middle-skill ICT/digital media workforce, men are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 46%. The ICT/digital media workforce contains more White workers than the overall middle-skill workforce. ICT/digital media workers have a similar age distribution to the rest of the middle-skill workforce, although slightly older.

Exhibit 89. Gender composition of the ICT/digital media workforce

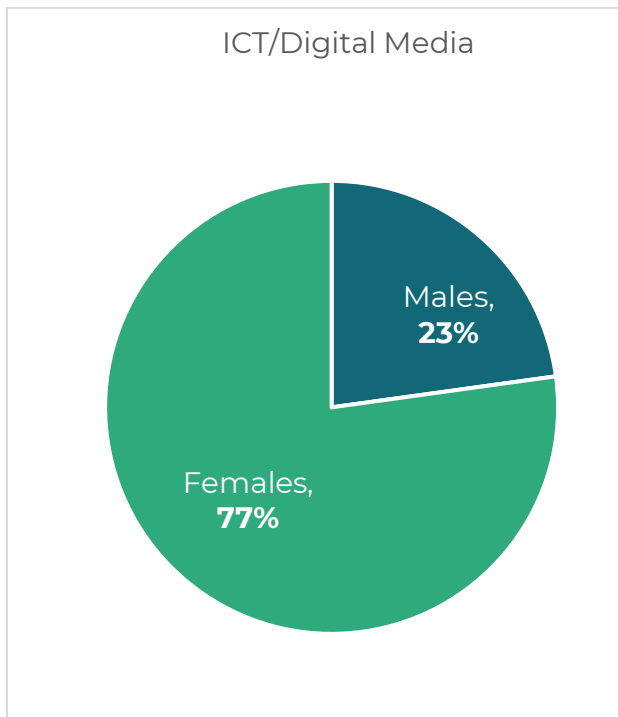


Exhibit 90. Race/ethnicity composition of the ICT/digital media workforce

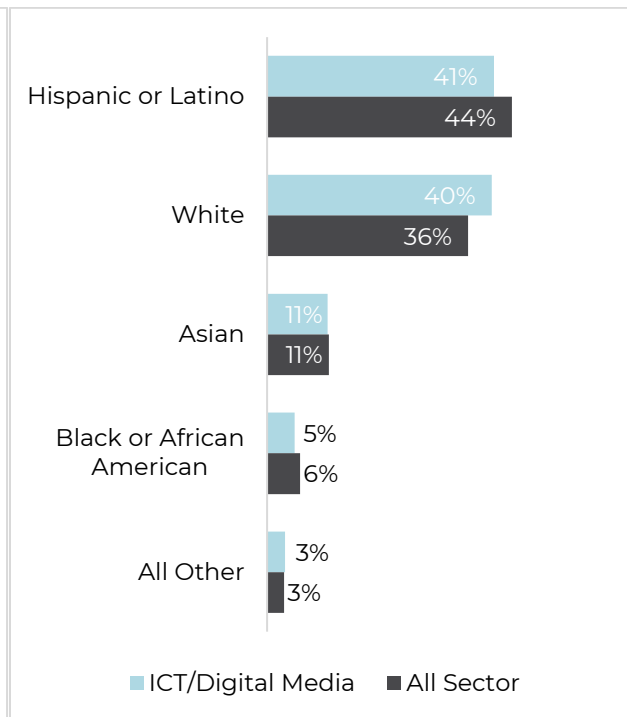
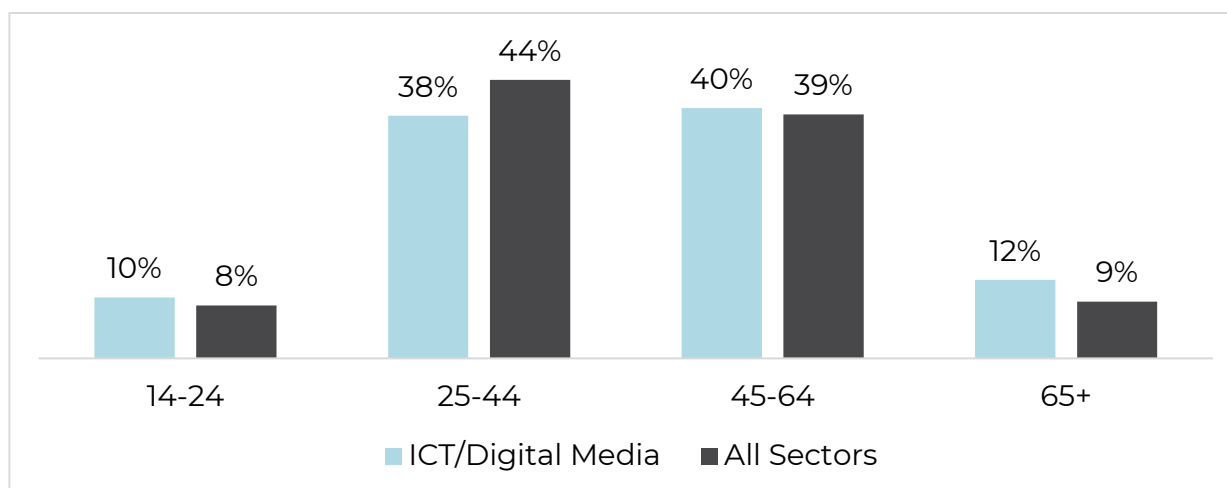


Exhibit 91. ICT/digital media workforce composition by age cohorts



ICT/Digital Media Demand

Exhibit 92 displays ICT/digital media employment and occupational projections. There were nearly 39,500 middle-skill ICT/digital media jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 900 jobs through 2029, growing by 2%. There are more than 2,000 annual job openings projected for ICT/digital media workers over this timeframe. Office clerks, general, are projected to have the most annual job openings through 2029.

Exhibit 92. ICT/digital media employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Office Clerks, General	18,508	18,764	256	1%	2,237
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	10,186	10,761	575	6%	1,262
Executive Secretaries and Executive Administrative Assistants	2,048	2,171	123	6%	240
Computer User Support Specialists	2,484	2,615	130	5%	187
Data Entry Keyers	629	579	(50)	(8%)	68
Telecommunications Line Installers and Repairers	687	678	(9)	(1%)	66
Network and Computer Systems Administrators	1,091	1,112	21	2%	63
Photographers	633	644	12	2%	59
Audio and Video Technicians	412	444	32	8%	43
Word Processors and Typists	355	307	(48)	(14%)	39
Computer Network Support Specialists	445	481	36	8%	36
Procurement Clerks	375	367	(8)	(2%)	35
Surveying and Mapping Technicians	234	244	9	4%	32

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Web and Digital Interface Designers	414	423	8	2%	30
Computer Network Architects	364	387	23	6%	24
Top Jobs Total	38,865	18,873	909	2%	1,962
<i>All other</i>	612	649	37	6%	62
Total	39,477	19,522	945	2%	2,024

ICT/Digital Media Hourly Earnings

Exhibit 93 displays the hourly earnings for the top middle-skill ICT/digital media occupations in the CVML-S subregion. Computer network architects have the highest entry-level hourly earnings in the ICT/digital media occupational group at \$38.86 per hour.

Exhibit 93. ICT/digital media hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Computer Network Architects	\$38.86	\$51.01	\$70.00
Network and Computer Systems Administrators	\$38.08	\$45.30	\$50.48
Telecommunications Line Installers and Repairers	\$30.42	\$41.49	\$46.50
Executive Secretaries and Executive Administrative Assistants	\$29.61	\$36.96	\$44.02
Computer Network Support Specialists	\$29.11	\$35.69	\$45.79
Computer User Support Specialists	\$25.32	\$29.55	\$37.65
Web and Digital Interface Designers	\$25.14	\$38.19	\$58.31
Surveying and Mapping Technicians	\$21.34	\$26.78	\$36.15
Procurement Clerks	\$21.23	\$24.27	\$28.11
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$20.04	\$23.62	\$28.48
Audio and Video Technicians	\$20.00	\$25.76	\$34.51
Word Processors and Typists	\$19.44	\$22.38	\$24.33
Office Clerks, General	\$18.13	\$21.78	\$24.36
Data Entry Keyers	\$17.86	\$19.39	\$23.16
Photographers	\$16.46	\$24.17	\$45.26

Exhibit 94 displays the average hourly earnings for the ICT/digital media occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$23.47 per hour, which is above the \$16.90

living wage in the CVML-S subregion. The median advertised salary for the top ICT/digital media occupations was \$24.98 per hour over the last 12 months.

Exhibit 94. Average ICT/digital media hourly earnings in the subregion

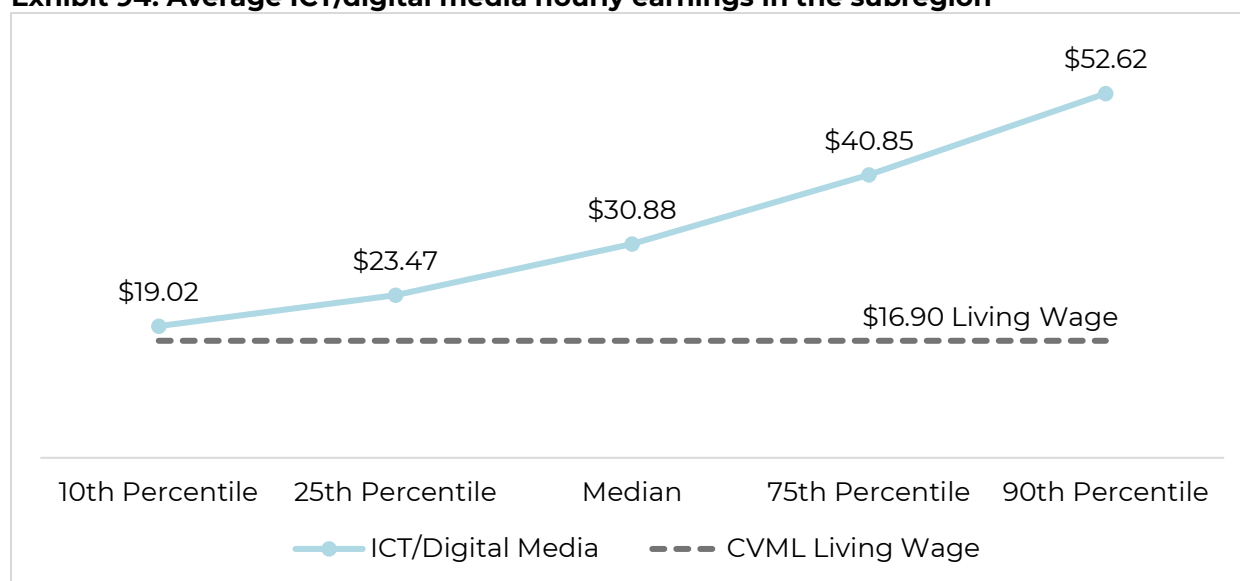


Exhibit 95 displays the certifications, specialized skills, and soft skills included in employer job ads for ICT/digital media workers. Over the last 12 months, from February 2025 to January 2026, there were more than 3,800 job advertisements posted for the top ICT/digital media occupations detailed in this report. Nearly half of job advertisements were posted for secretaries and administrative assistants, except legal, medical, and executive, indicating that job ads may be skewed towards the skill and certifications typically required for this occupation.

Exhibit 95. Top 10 certifications, specialized skills, and soft skills in job postings for ICT/digital media occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License	Administrative Support	Communication
Typing Certification	Data Entry	Customer Service
CompTIA A+	Office Equipment	Operations
CompTIA Security+	Office Supply Management	Clerical Works
Security Clearance	Invoicing	Detail Oriented
Cardiopulmonary Resuscitation (CPR) Certification	Punctuation and Capitalization	Management
First Aid Certification	Operating Systems	Filing
Secret Clearance	Proofreading	Microsoft Office
CompTIA Network+	Technical Support	Troubleshooting (Problem Solving)
Top Secret Clearance	Workflow Management	Writing

Exhibit 96 displays the community college ICT/digital media programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community

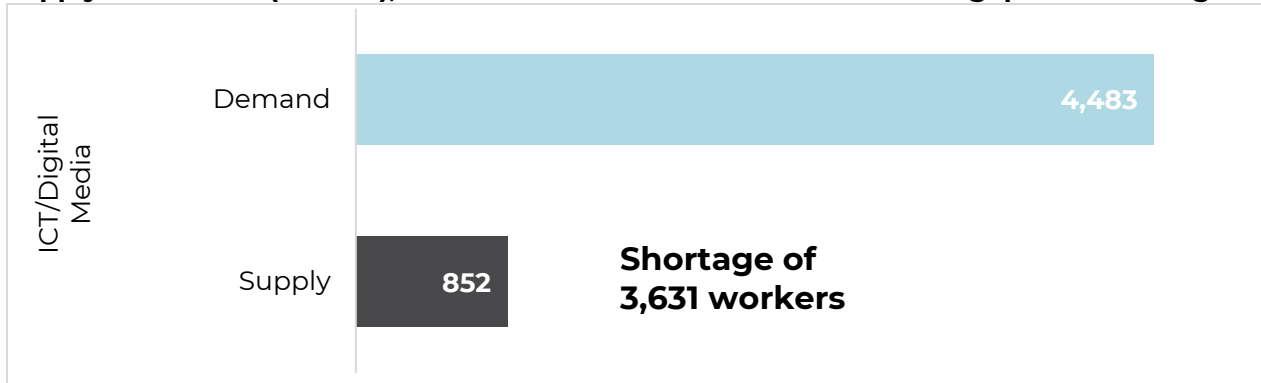
colleges issued an average of 639 awards over the last three academic years from 11 colleges. Other postsecondary institutions issued 153 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 852 awards annually in ICT/digital media programs. See the appendix to view award data by postsecondary institution.

Exhibit 96. Community college ICT/digital media programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
051400 - Office Technology/Office Computer Applications	103	8
060200 - Journalism	25	3
061220 - Film Production	4	1
061400 - Digital Media	22	2
061410 - Multimedia	13	1
061430 - Website Design and Development	12	3
070100 - Information Technology, General	16	5
070200 - Computer Information Systems	122	6
070210 - Software Applications	24	2
070700 - Computer Software Development	4	2
070710 - Computer Programming	31	3
070800 - Computer Infrastructure and Support	8	2
070810 - Computer Networking	89	6
070820 - Computer Support	9	3
070900 - World Wide Web Administration	9	1
093430 - Telecommunications Technology	8	1
100500 - Commercial Music	41	4
101200 - Applied Photography	53	2
101300 - Commercial Art	3	1
103000 - Graphic Art and Design	43	3
Total	639	-

Exhibit 97 compares annual employer demand for middle-skill workers in the ICT/digital media sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 3,631 workers in the subregion’s ICT/digital media workforce.

Exhibit 97. ICT/digital media workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the ICT/digital media sector. The following 16 ICT/digital media program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 060400 - Radio and Television
- 060410 - Radio
- 060420 - Television (including combined TV-film-video)
- 060430 - Broadcast Journalism
- 060700 - Technical Communication
- 061000 - Mass Communications
- 061420 - Electronic Game Design
- 061440 - Animation
- 061450 - Desktop Publishing
- 061460 - Computer Graphics and Digital Imagery
- 069900 - Other Media and Communications
- 070720 - Database Design and Administration
- 070730 - Computer Systems Analysis
- 070910 - E-Commerce (technology emphasis)
- 079900 - Other Information Technology
- 220610 - Geographic Information Systems



Public Safety

Summary

- There were over 27,500 middle-skill public safety jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 2,000 jobs through 2029, growing by 3%. There are over 2,000 annual job openings projected for public safety workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$33.22 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were over 2,500 job ads posted in the CVML-S subregion for the top public safety occupations profiled in this report. The top job titles were security officers, sheriff's deputies, and border patrol agents.
- Specialized skills: The top skill is law enforcement, and the top certification is a Valid Driver's License (CDL Class C).

Public Safety Demographics

Comprising 28% of the middle-skill public safety workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 54%. The public safety workforce contains more Black or African American workers than the overall middle-skill workforce. Public safety workers are considerably younger than the middle skill workforce overall, with 61% of workers aged 44 or younger.

Exhibit 98. Gender composition of the public safety workforce

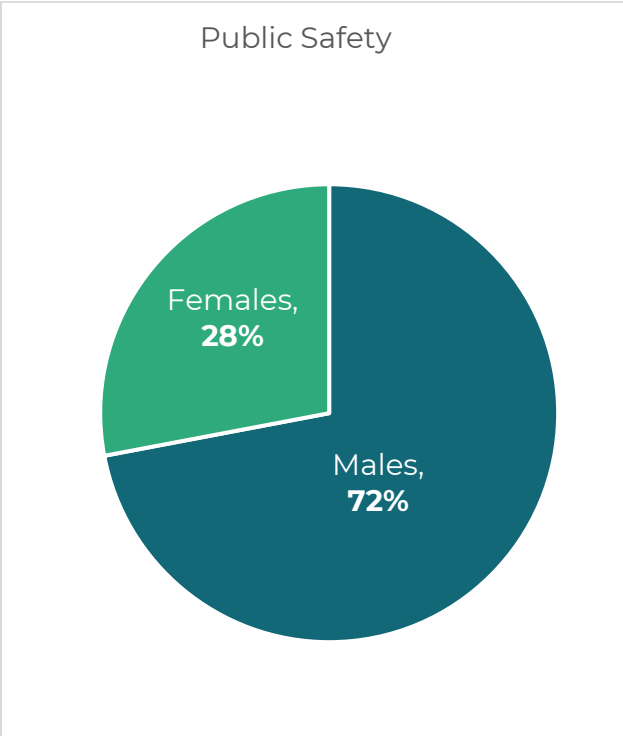


Exhibit 99. Race/ethnicity composition of the public safety workforce

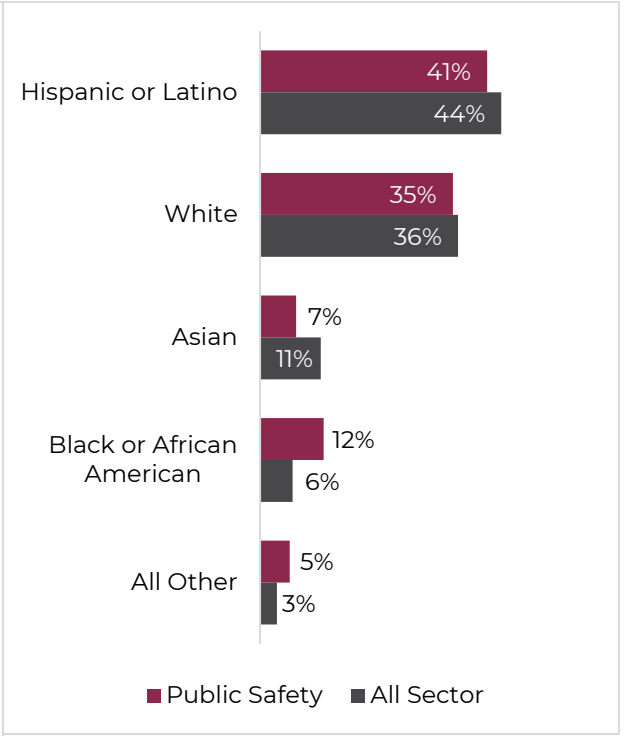
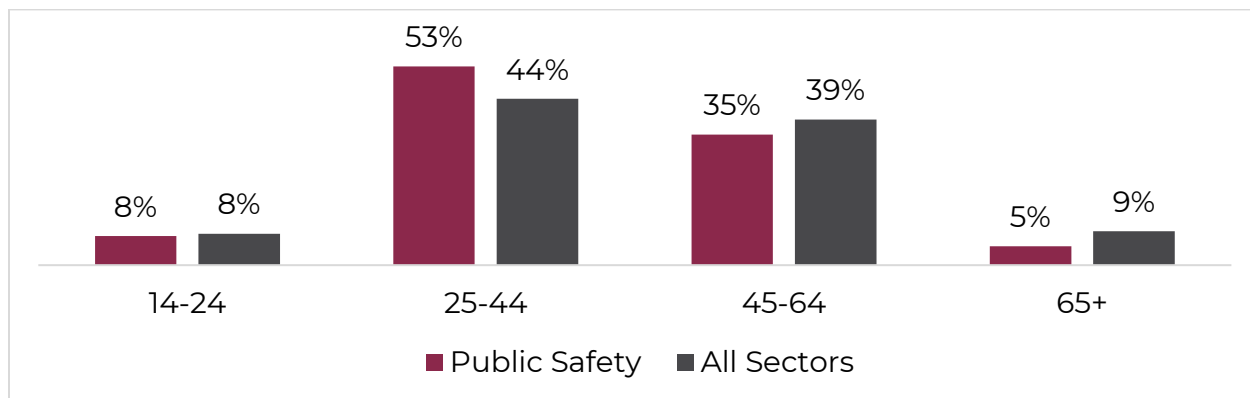


Exhibit 100. Public safety workforce composition by age cohorts



Public Safety Demand

Exhibit 101 displays public safety employment and occupational projections. There were over 27,500 middle-skill public safety jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 2,000 jobs through 2029, growing by 3%. There are over 2,000 annual job openings projected for public safety workers over this timeframe. Security guards are projected to have the most annual job openings through 2029.

Exhibit 101. Public safety employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Security Guards	6,817	6,913	97	1%	898
Correctional Officers and Jailers	8,186	8,235	49	1%	747
Police and Sheriff's Patrol Officers	4,012	4,451	439	11%	400
Firefighters	2,163	2,387	225	10%	211
First-Line Supervisors of Correctional Officers	1,056	1,099	43	4%	97
Public Safety Telecommunicators	692	762	70	10%	91
First-Line Supervisors of Police and Detectives	974	1,075	101	10%	86
Detectives and Criminal Investigators	880	936	56	6%	77
First-Line Supervisors of Firefighting and Prevention Workers	739	810	71	10%	61
Life, Physical, and Social Science Technicians, All Other	284	303	19	7%	40
First-Line Supervisors of Security Workers	377	385	8	2%	40
Private Detectives and Investigators	390	400	11	3%	37
Forensic Science Technicians	188	212	24	13%	29

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Gambling Surveillance Officers and Gambling Investigators	144	148	4	3%	19
Transportation Security Screeners	174	177	3	2%	18
Top Jobs Total	27,076	18,873	909	3%	1,962
<i>All other</i>	475	506	31	7%	52
Total	27,550	19,379	940	3%	2,014

Public Safety Hourly Earnings

Exhibit 102 displays the hourly earnings for the top middle-skill public safety occupations in the CVML-S subregion. First-line supervisors of correctional officers have the highest entry-level hourly earnings in the public safety occupational group at \$58.68 per hour.

Exhibit 102. Public safety hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
First-Line Supervisors of Correctional Officers	\$58.68	\$66.72	\$72.83
First-Line Supervisors of Police and Detectives	\$58.42	\$62.80	\$75.67
First-Line Supervisors of Firefighting and Prevention Workers	\$43.81	\$52.96	\$60.10
Detectives and Criminal Investigators	\$43.47	\$49.54	\$60.31
Correctional Officers and Jailers	\$38.16	\$47.89	\$51.67
Police and Sheriff's Patrol Officers	\$36.94	\$42.42	\$55.21
Forensic Science Technicians	\$30.39	\$38.43	\$48.49
Gambling Surveillance Officers and Gambling Investigators	\$27.96	\$35.03	\$39.86
Firefighters	\$27.27	\$34.89	\$40.88
Transportation Security Screeners	\$24.18	\$29.21	\$31.01
Public Safety Telecommunicators	\$22.67	\$29.37	\$34.74
Life, Physical, and Social Science Technicians, All Other	\$22.60	\$29.77	\$40.59
First-Line Supervisors of Security Workers	\$22.05	\$29.95	\$39.73
Private Detectives and Investigators	\$20.86	\$27.74	\$43.91
Security Guards	\$16.92	\$18.14	\$20.72

Exhibit 103 displays the average hourly earnings for the public safety occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$33.22 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary for the top public safety occupations was \$24.86 per hour over the last 12 months.

Exhibit 103. Average public safety hourly earnings in the subregion

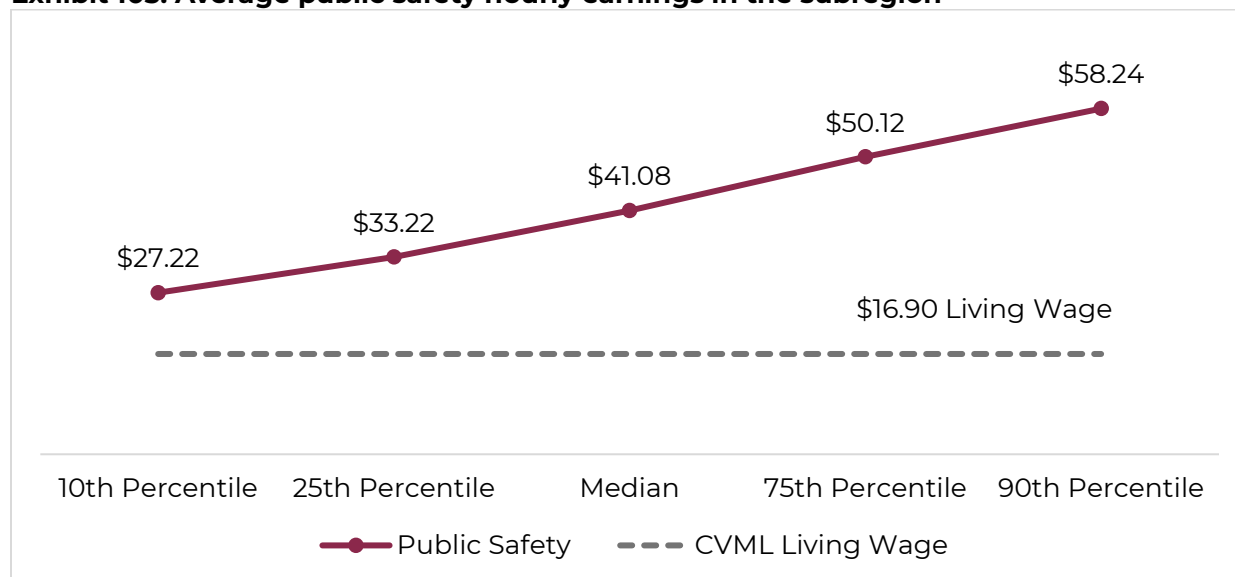


Exhibit 104 displays the certifications, specialized skills, and soft skills included in employer job ads for public safety workers. Over the last 12 months, from February 2025 to January 2026, there were over 2,500 job advertisements posted for the top public safety occupations detailed in this report. Over 40% of job advertisements were posted for security guards, indicating that skills and certification information may be skewed towards the requirements for this occupation.

Exhibit 104. Top 10 certifications, specialized skills, and soft skills in job postings for public safety occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License (CDL Class C)	Law Enforcement	Communication
Cardiopulmonary Resuscitation (CPR) Certification	Emergency Response	Customer Service
First Aid Certification	Good Driving Record	Operations
Automated External Defibrillator (AED) Certification	Patrolling	Investigation
Security Guard License	Contraband Detection And Control	Management
Emergency Medical Technician (EMT)	First Aid	Problem Solving
Certified First Responder (CFR)	Criminal Corrections	Report Writing
Basic Life Support (BLS) Certification	Alarm Devices	Writing
Peace Officer Standards And Training (POST) Certificate	Cardiopulmonary Resuscitation (CPR)	Professionalism
Security Clearance	Crime Prevention	Tactfulness

Exhibit 105 displays the community college public safety programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 1,090 awards over the last three academic years from 11 colleges. Other postsecondary institutions issued 127 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 1,218 awards

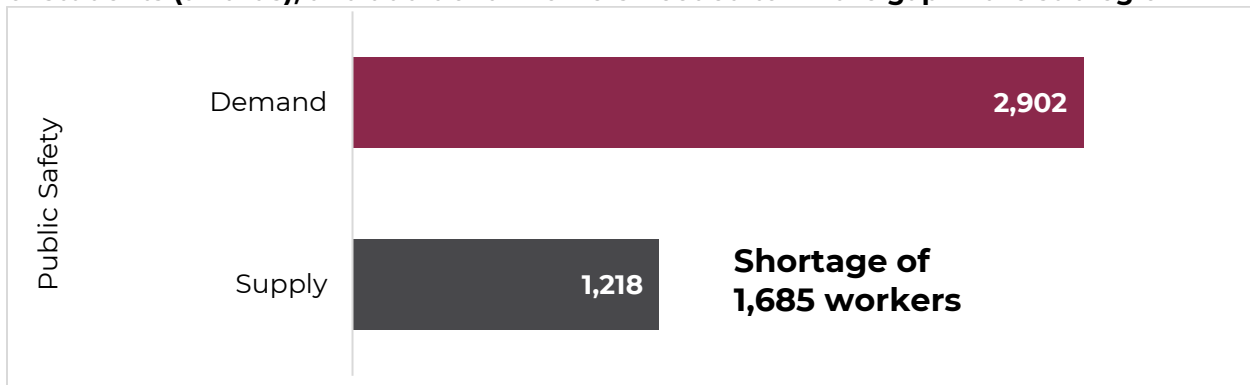
annually in public safety programs. See the appendix to view award data by postsecondary institution.

Exhibit 105. Community college public safety programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
210500 - Administration of Justice	742	11
210510 - Corrections	48	9
210540 - Forensics, Evidence, and Investigation	2	1
210550 - Police Academy	88	3
213300 - Fire Technology	122	5
213310 - Wildland Fire Technology	3	2
213350 - Fire Academy	77	3
219900 - Other Public and Protective Services	8	1
Total	1,090	-

Exhibit 106 compares annual employer demand for middle-skill workers in the public safety sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 1,685 workers in the subregion’s public safety workforce.

Exhibit 106. Public safety workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the public safety sector. The following two public safety program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 210520 - Probation and Parole
- 210530 - Industrial and Transportation Security

Retail, Hospitality & Tourism

Summary

- There were over 33,100 middle-skill retail, hospitality, and tourism jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 900 jobs through 2029, growing by 3%. There are nearly 2,000 annual job openings projected for retail, hospitality, and tourism workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$19.41 per hour, which is above the \$16.90 living wage in the CVML-S subregion.
- There were nearly 7,000 job ads posted in the CVML-S subregion for the top retail, hospitality, and tourism occupations profiled in this report. The top job titles were shift supervisors, assistant managers, and store managers.
- Specialized skills: The top skill is merchandising, and the top certification following a valid driver’s license is a ServSafe® Certification.

Retail, Hospitality & Tourism Demographics

The gender makeup of the middle-skill retail, hospitality, and tourism workforce is similar to the middle-skill workforce across all sectors. The retail, hospitality, and tourism workforce includes more Asian Americans than the overall middle-skill workforce. Retail, hospitality, and tourism workers are considerably younger than the middle skill workforce overall, with 57% of workers aged 44 or younger.

Exhibit 107. Gender composition of the retail, hospitality, and tourism workforce

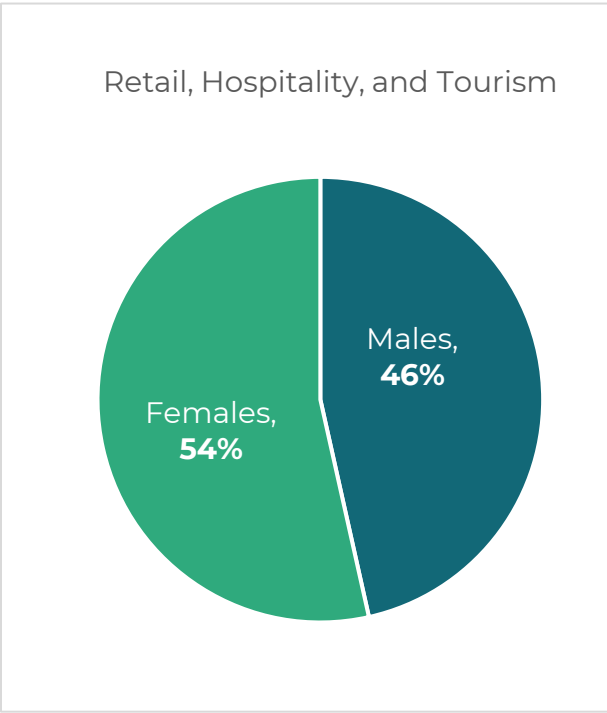


Exhibit 108. Race/ethnicity composition of the retail, hospitality, and tourism workforce

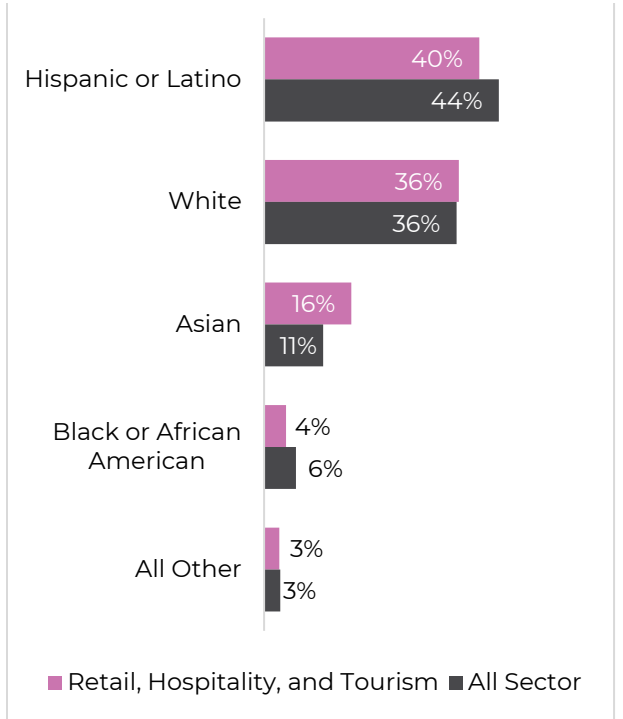
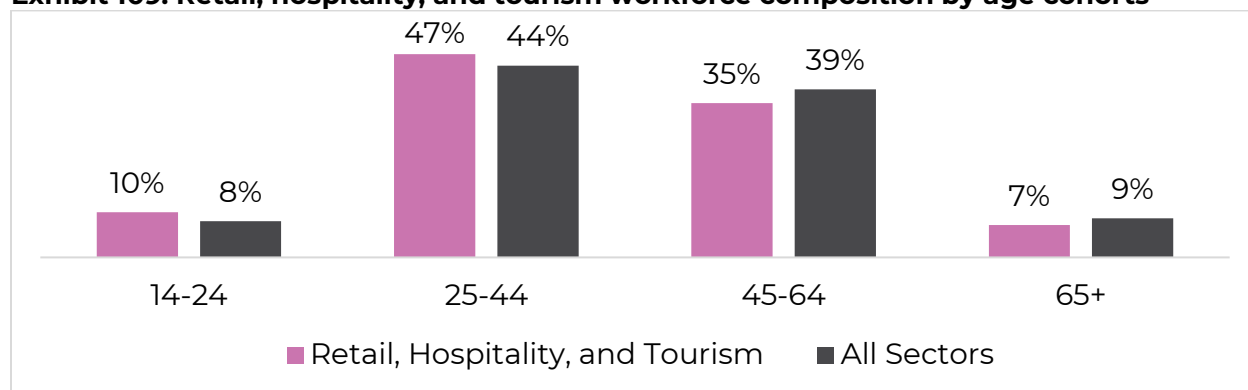


Exhibit 109. Retail, hospitality, and tourism workforce composition by age cohorts



Retail, Hospitality & Tourism Demand

Exhibit 110 displays retail, hospitality, and tourism employment and occupational projections. There were over 33,100 middle-skill retail, hospitality, and tourism jobs in the CVML-S subregion in 2024. This occupational group is projected to add over 900 jobs through 2029, growing by 3%. There are nearly 2,000 annual job openings projected for retail, hospitality, and tourism workers over this timeframe. First-line supervisors of food preparation and serving workers are projected to have the most annual job openings through 2029.

Exhibit 110. Retail, hospitality, and tourism employment and occupational projections, CVML-S subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
First-Line Supervisors of Food Preparation and Serving Workers	7,669	8,412	743	10%	1,298
First-Line Supervisors of Retail Sales Workers	8,925	9,064	140	2%	927
Hairdressers, Hairstylists, and Cosmetologists	3,707	3,986	279	8%	548
Exercise Trainers and Group Fitness Instructors	1,697	1,974	277	16%	393
Food Service Managers	2,676	2,912	236	9%	357
Manicurists and Pedicurists	2,296	2,678	381	17%	354
First-Line Supervisors of Housekeeping and Janitorial Workers	1,412	1,517	105	7%	194
Chefs and Head Cooks	1,221	1,350	129	11%	177
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	1,177	1,256	79	7%	144
First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	667	745	78	12%	88
First-Line Supervisors of Personal Service Workers	584	648	65	11%	79
Tour and Travel Guides	288	325	37	13%	78

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Lodging Managers	314	335	21	7%	37
Reservation and Transportation Ticket Agents and Travel Clerks	244	248	4	2%	27
Travel Agents	130	140	10	8%	18
Top Jobs Total	33,008	18,873	909	3%	1,962
<i>All other</i>	95	92	(4)	(4%)	11
Total	33,103	18,965	905	3%	1,973

Retail, Hospitality & Tourism Hourly Earnings

Exhibit 111 displays the hourly earnings for the top middle-skill retail, hospitality, and tourism occupations in the CVML-S subregion. Lodging managers have the highest entry-level hourly earnings in the retail, hospitality, and tourism occupational group at \$22.54 per hour.

Exhibit 111. Retail, hospitality, and tourism hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Lodging Managers	\$22.54	\$32.03	\$40.70
Food Service Managers	\$20.68	\$27.74	\$37.21
First-Line Supervisors of Personal Service Workers	\$19.90	\$22.16	\$27.30
First-Line Supervisors of Housekeeping and Janitorial Workers	\$19.33	\$25.22	\$32.22
Chefs and Head Cooks	\$18.50	\$28.97	\$34.36
First-Line Supervisors of Food Preparation and Serving Workers	\$18.48	\$21.59	\$23.39
First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	\$18.46	\$23.01	\$29.06
First-Line Supervisors of Retail Sales Workers	\$18.14	\$22.50	\$28.90
Reservation and Transportation Ticket Agents and Travel Clerks	\$17.39	\$19.08	\$23.58
Tour and Travel Guides	\$17.23	\$20.51	\$25.95
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$16.92	\$24.20	\$32.69
Exercise Trainers and Group Fitness Instructors	\$16.90	\$22.50	\$31.59
Travel Agents	\$16.90	\$22.16	\$31.62
Manicurists and Pedicurists	\$16.90	\$16.90	\$17.06
Hairdressers, Hairstylists, and Cosmetologists	\$16.90	\$17.16	\$25.94

Exhibit 112 displays the average hourly earnings for the retail, hospitality, and tourism occupational group, categorized by percentile, compared to the regional living wage. The average entry-level hourly earnings for the middle-skill occupational group is \$19.41 per hour, which is above the \$16.90 living wage in the CVML-S subregion. The median advertised salary

for the top retail, hospitality, and tourism occupations was \$24.12 per hour over the last 12 months.

Exhibit 112. Average retail, hospitality, and tourism hourly earnings in the subregion

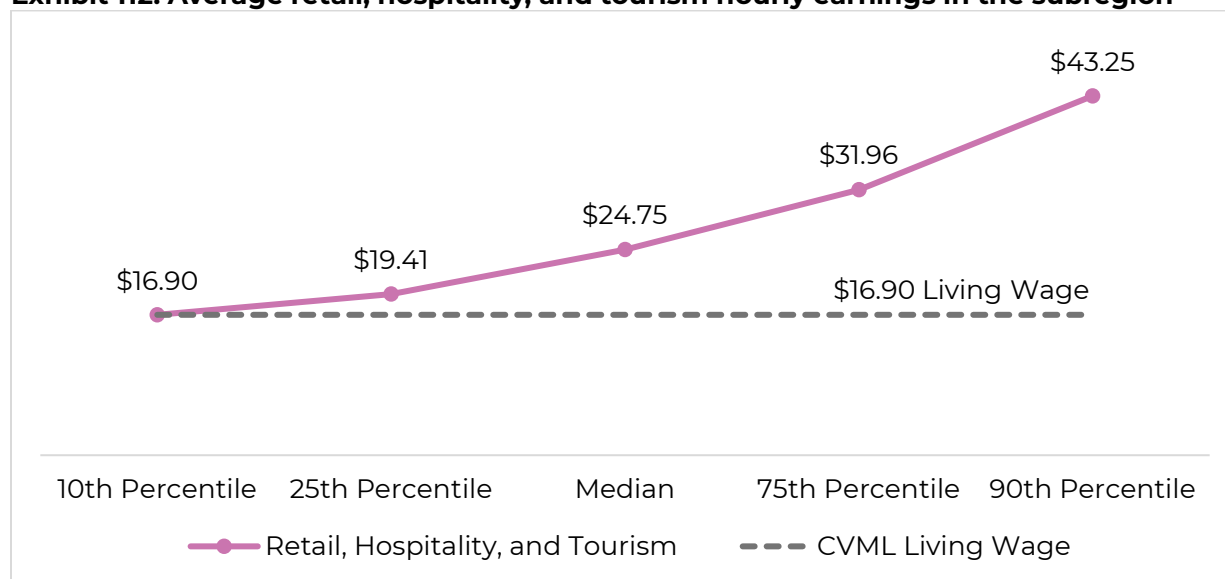


Exhibit 113 displays the certifications, specialized skills, and soft skills included in employer job ads for retail, hospitality, and tourism workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 7,000 job advertisements posted for the top retail, hospitality, and tourism occupations detailed in this report. Over 40% of job advertisements were posted for first-line supervisors of retail sales workers, indicating that skills and certification information may be skewed towards the requirements for this occupation.

Exhibit 113. Top 10 certifications, specialized skills, and soft skills in job postings for retail, hospitality, and tourism occupations

Certifications	Specialized Skills	Soft Skills
Valid Driver's License (CDL Class C)	Merchandising	Customer Service
ServSafe Certification	Restaurant Operation	Management
Food Handler's Card	Cash Handling	Communication
Cardiopulmonary Resuscitation (CPR) Certification	Retail Operations	Sales
Barber License	Lifting Ability	Leadership
Cosmetology License	Food Safety And Sanitation	Operations
Automotive Service Excellence (ASE) Certification	Inventory Management	Cleanliness
First Aid Certification	Marketing	Scheduling
Automated External Defibrillator (AED) Certification	Sanitation	Coaching
Food Safety Certification	Retail Sales	Problem Solving

Exhibit 114 displays the community college retail, hospitality, and tourism programs in the CVML-S subregion that have issued awards over the last three academic years. Subregional

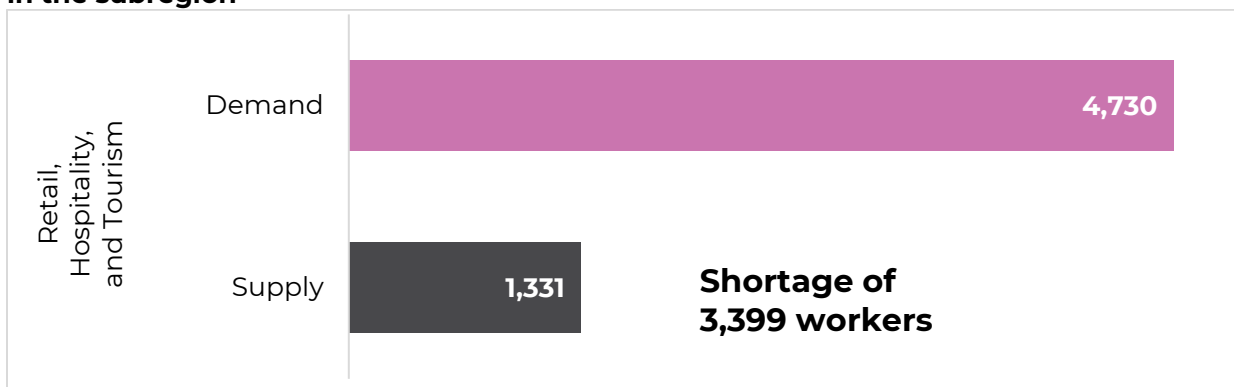
community colleges issued an average of 187 awards over the last three academic years from five colleges. Other postsecondary institutions issued 1,144 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 1,331 awards annually in retail, hospitality, and tourism programs. See the appendix to view award data by postsecondary institution.

Exhibit 114. Community college retail, hospitality, and tourism programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
050650 - Retail Store Operations and Management	64	4
051440 - Office Management	8	1
130300 - Fashion	12	1
130310 - Fashion Design	9	1
130320 - Fashion Merchandising	14	2
130630 - Culinary Arts	51	4
130700 - Hospitality	4	1
130710 - Restaurant and Food Services and Management	21	2
130720 - Lodging Management	1	1
130730 - Resort and Club Management	4	1
Total	187	-

Exhibit 115 compares annual employer demand for middle-skill workers in the retail, hospitality, and tourism sector with the average number of relevant awards issued each year by postsecondary institutions in the subregion. The comparison indicates a potential annual shortage of 3,399 workers in the subregion’s retail, hospitality, and tourism workforce.

Exhibit 115. Retail, hospitality, and tourism workforce demand (annual job openings), postsecondary supply of students (awards), and additional workers needed to fill the gap in the subregion



Programs not currently offered by community colleges in the subregion may serve as opportunities to expand program offerings in the retail, hospitality, and tourism sector. The following 11 retail, hospitality, and tourism program codes have not issued awards in the CVML-S subregion over the last three academic years.

- 050960 – Display
- 051600 - Labor and Industrial Relations
- 060600 - Public Relations
- 083570 - Aquatics and Lifesaving
- 095910 - Diving and Underwater Safety
- 130100 - Family and Consumer Sciences, General
- 130110 - Consumer Services
- 130200 - Interior Design and Merchandising
- 300800 - Dry Cleaning
- 300900 - Travel Services and Tourism
- 302040 - Flight Attendant



Conclusion

The middle-skill occupations within the 10 sectors detailed in this report are projected to have nearly 61,900 job openings available annually over the next five years within the subregion. Subregional postsecondary institutions have conferred an average of 16,838 awards annually over the last three academic years. The difference between the projected workforce demand and the average number of awards issued by subregional postsecondary institutions indicates an undersupply of 45,090 workers in the subregion. Exhibit 116 compares middle-skill demand with postsecondary supply and the resulting workforce gaps by CCCCCO sector.

Exhibit 116. Comparison between workforce demand (annual job openings) and postsecondary supply of students (awards) for each sector, showing gaps in the number of workers to fill openings

Occupational Sector	Demand (Annual Job Openings)	Supply (Average Annual Awards)	Gap
Health	20,736	5,029	15,707
Business and Entrepreneurship	8,573	1,633	6,939
Advanced Transportation and Logistics	5,536	1,731	3,805
Retail, Hospitality, and Tourism	4,730	1,331	3,399
ICT/Digital Media	4,483	852	3,631
Agriculture, Water, and Environmental Technologies	4,409	1,014	3,395
Education	4,357	1,933	2,424
Energy, Construction, and Utilities	3,739	1,195	2,544
Public Safety	2,902	1,218	1,685
Advanced Manufacturing	2,463	901	1,562
Total	61,928	16,838	45,090

The three sectors with the greatest number of annual job openings also have the largest gaps in workforce supply in the subregion:

- Health: 15,507 workers
- Business and Entrepreneurship: 6,939 workers
- Advanced Transportation and Logistics: 3,805 workers

Sectors with the smallest workforce supply gaps include advanced manufacturing (a shortage of 1,562 workers) and public safety (a shortage of 1,685 workers). However, it should be noted that these sectors also comprise the smallest share of demand. On average, the sectors issuing the most awards each year are the health sector (5,029 awards), the education sector (1,933 awards), and the advanced transportation and logistics sector (1,731 awards). The information and communication technologies (ICT)/digital media sector has issued the fewest awards (852), followed by advanced manufacturing (901).

The health sector is projected to have the highest demand for middle-skill workers over the next five years, accounting for 33% of the subregion's projected demand for middle-skill

workers. ICT/digital media, business and entrepreneurship, and agriculture, water, and environmental technologies, and health have the largest supply gaps in proportion to their respective demand. These sectors play a critical role in powering the subregional economy and intersect with other fields of work of subregional importance, such as business and agriculture. Education, public safety, and advanced manufacturing have the smallest supply gaps relative to projected demand.

Program Development Recommendations

These recommendations are based on programs with no awards issued over the last three academic years and, therefore, do not encompass all opportunities for program development in the subregion. These recommendations, displayed by sector, highlight a program code that has not issued awards in the last three academic years and an occupation that would benefit from program development.

- **Advanced Manufacturing:**
 - *Computer Electronics (0934.10)*
 - This program prepares students for employment as Electrical and Electronic Engineering Technologists and Technicians (17-3023), which pays students \$37.37 per hour at the entry level and \$45.35 per hour at the median, with 70 job openings projected annually over the next five years.
 - This program prepares students for employment as Electrical and Electronics Repairers, Commercial and Industrial Equipment (49-2094), which pays students \$32.57 per hour at the entry level and \$39.36 per hour at the median, with 38 job openings projected annually over the next five years.
- **Advanced Transportation and Logistics:**
 - *Heavy Equipment Maintenance (0947.20)*
 - This program prepares students for employment like Mobile Heavy Equipment Mechanics, Except Engines (49-3042), which is projected to have 168 annual job openings over the next five years and pays workers \$27.69 per hour at the entry level.
 - This program prepares students for employment like Control and Valve Installers and Repairers, Except Mechanical Door (49-9012), which is projected to have 32 annual job openings over the next five years and pays workers \$38.70 per hour at the entry level.
- **Agriculture, Water, and Environmental Technologies:**
 - *Veterinary Technician (Licensed) (0102.10)*
 - This program prepares students for employment like Veterinary Technologists and Technicians (29-2056), which is projected to have 57 annual job openings over the next five years and pays workers \$21.23 per hour at the entry level.
 - This program prepares students for employment like Veterinary Assistants and Laboratory Animal Caretakers (31-9096), which is projected to have 103 annual job openings over the next five years and pays workers \$18.31 per hour at the median level.
- **Business and Entrepreneurship Sector:**
 - *Insurance (0512.00)*
 - This program prepares students for employment as Claims Adjusters, Examiners, and Investigators (13-1031), which is projected to have 71 annual job openings over the next five years and pays workers \$31.46 per hour at the entry level.

- **Education Sector:**
 - *Educational Aide (Teacher Assistant), Bilingual (0802.10)*
 - This program prepares students for employment as Secondary School Teachers, Except Special and Career/Technical Education (25-2031), which is projected to have 808 annual job openings over the next five years and pays an entry-level wage of \$36.57 per hour, with workers earning \$46.74 at the median level.
 - This program prepares students for employment as an Elementary School Teacher, Except Special Education (25-2021), which is projected to have 1,139 annual job openings over the next five years and pays an entry-level wage of \$30.81 per hour, with workers earning \$40.01 at the median level.
- **Energy, Construction, and Utilities Sector:**
 - *Roofing (0952.90)*
 - This program prepares students for employment as a Roofers (47-2181), which is projected to have 115 annual job openings over the next five years and pays an entry-level wage of \$26.67 per hour, with workers earning \$29.13 at the median level.
 - *Energy Systems Technology (0946.10)*
 - This program prepares students for employment as a Solar Photovoltaic Installer (47-2231), which is projected to have 110 annual job openings over the next five years and pays an entry-level wage of \$23.34 per hour, with workers earning \$26.61 at the median level.
- **Health Sector:**
 - *Radiation Therapy Technician (1226.00)*
 - This program prepares students for employment as a Radiation Technologists and Technicians (29-2034), which is projected to have 99 annual job openings over the next five years and pays an entry-level wage of \$38.00 per hour, with workers earning \$46.42 at the median level.
 - *Dental Hygienist (1240.20)*
 - This program prepares students for employment as a Dental Hygienist (29-1292), which is projected to have 86 annual job openings over the next five years and pays an entry-level wage of \$46.24 per hour, with workers earning \$48.62 at the median level.
- **Information and Communication Technologies/Digital Media Sector:**
 - *Geographic Information Systems (2206.10)*
 - This program prepares students for employment as Surveying and Mapping Technicians (17-3031), which is projected to have 32 annual job openings over the next five years. It pays workers entry-level hourly earnings of \$21.34 and \$26.78 per hour at the median.
- **Public Safety Sector:**
 - *Industrial and Transportation Security (2105.30)*
 - This program prepares students for employment as Transportation and Security Screeners (33-9093), which is projected to have 18 annual job openings over the next five years and pays workers and entry-level hourly earnings of \$24.18 and \$29.21 per hour at the median.
- **Retail, Hospitality, and Tourism Sector:**
 - *Display (0509.60)*
 - This program prepares students for employment as Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (41-4012), which is projected to have 602 annual job

- openings over the next five years and pays workers and entry-level hourly earnings of \$23.08 and \$32.80 per hour at the median.
- Additionally, this program prepares students for employment as First-Line Supervisors of Retail Sales Workers (41-1011), which is projected to have 927 annual job openings over the next five years and pays workers and entry-level hourly earnings of \$18.14 and \$22.50 per hour at the median.
- *Travel Services and Tourism (3009.00)*
 - This program prepares students for employment as Tour and Travel Guides (39-7018), which is projected to have 78 annual job openings over the next five years and pays workers and entry-level hourly earnings of \$17.23 and \$20.51 per hour at the median.

Appendix A: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report are derived from a variety of sources. Data were drawn from external sources, including Lightcast, the California Community Colleges Chancellor's Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment Lightcast	Lightcast. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Lightcast earnings by industry: https://lightcast.io .
Typical Education Level and On-the-job Training	The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which the BLS publishes projections data: https://www.bls.gov/emp/tables/education-and-training-by-occupation.htm .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division, labormarketinfo.edd.ca.gov
Job Posting and Skills Data	Lightcast, https://lightcast.io .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities, and interests associated with specific occupations: onetonline.org https://www.onetonline.org/ .
K-12 Enrollment and Demographics	The California Department of Education (CDE) collects enrollment and demographic data on students enrolled in the K-12 system in California. https://www.cde.ca.gov/ds/
Community College Enrollment and Demographics	DataVista is a collaboration between the California Community Colleges Chancellor's Office and WestEd. DataVista provides users with detailed student-level program information at California Community Colleges. https://datavista.cccco.edu/

Key Terms and Concepts

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by the total number of job openings.

Education Attainment Level: The highest education attainment level of workers aged 25 years or older. Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections are calculated using a proprietary Lightcast formula that incorporates historical employment and economic indicators, along with national, state, and local trends.

Living Wage: The cost of living in a specific community or subregion for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Race and Ethnicity: The federal government tracks several racial categories (white, Black or African American, Asian, etc.) but only two ethnic categories, Hispanic and non-Hispanic. There may be some overlap between race and ethnicity unless the two characteristics are clearly separated, e.g., "white non-Hispanic," "white Hispanic," and "Non-white Hispanic."

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs or retain the current employment level, the number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.

Wages Family Compositions: The living wage calculator estimates the living wage needed to support families. For single adult families, the adult is assumed to be employed full-time. For two adult families where both adults are in the labor force, both adults are assumed to be employed full-time. For two adult families where one adult is not in the labor force, one of the adults is assumed to be employed full-time while the other non-wage-earning adult provides full-time childcare for the family's children. Full-time work is assumed to be year-round, 40 hours per week for 52 weeks, per adult. Families with one child are assumed to have a 'young child' (4 years old). Families with two children are assumed to have a 'young child' and a 'child' (9 years old). Families with three children are assumed to have a 'young child,' a 'child,' and a 'teenager' (15 years old).

Appendix B: Postsecondary Supply for Each Sector

Exhibit B1. Postsecondary supply for the advanced manufacturing workforce

TOP6 or CIP with Title	College	3-Year Average Awards
092400 - Engineering Technology, General (requires Trigonometry)	Bakersfield College	3
093400 - Electronics and Electric Technology	Bakersfield College	29
	Fresno City College	124
	Lemoore College	5
093420 - Industrial Electronics	Fresno City College	7
093600 - Printing and Lithography	Fresno City College	3
094300 - Instrumentation Technology	Lemoore College	1
094500 - Industrial Systems Technology and Maintenance	Bakersfield College	5
	Clovis Community College	5
	Fresno City College	29
	Lemoore College	9
	Madera Community College	2
	College of the Sequoias	76
095000 - Aeronautical and Aviation Technology	Reedley College	39
095340 - Mechanical Drafting	College of the Sequoias	4
095600 - Manufacturing and Industrial Technology	Reedley College	44
	Bakersfield College	4
	Fresno City College	50
	Madera Community College	6
	Porterville College	1
095630 - Machining and Machine Tools	Reedley College	10
	Madera Community College	2
095650 - Welding Technology	Reedley College	30
	Bakersfield College	15
	Cerro Coso Community College	31
	Coalinga College	14
	Fresno City College	49
	Madera Community College	8

TOP6 or CIP with Title	College	3-Year Average Awards
	College of the Sequoias	26
	Taft College	6
095670 - Industrial and Occupational Safety and Health	Bakersfield College	11
	Taft College	6
15.0406 - Automation Engineer Technology/Technician	Institute of Technology	13
47.0303 - Industrial Mechanics and Maintenance Technology/Technician	San Joaquin Valley College-Bakersfield	7
	San Joaquin Valley College-Fresno	0
	San Joaquin Valley College-Trades Education Center	6
	San Joaquin Valley College-Visalia	23
48.0508 - Welding Technology/Welder	Advanced Career Institute	170
	Institute of Technology	26
Grand Total		901

Exhibit B2. Postsecondary supply for the advanced transportation and logistics workforce

TOP6 or CIP with Title	College	3-Year Average Awards
051000 - Logistics and Materials Transportation	Bakersfield College	9
094700 - Diesel Technology	Fresno City College	1
094730 - Heavy Equipment Operation	Coalinga College	11
094750 - Truck and Bus Driving	Coalinga College	2
094800 - Automotive Technology	Reedley College	34
	Bakersfield College	87
	Fresno City College	11
	College of the Sequoias	145
094900 - Automotive Collision Repair	Fresno City College	23
095010 - Aviation Airframe Mechanics	Reedley College	14
095020 - Aviation Powerplant Mechanics	Reedley College	10
302020 - Piloting	Reedley College	1
47.0604 - Automobile/Automotive Mechanics Technology/Technician	UEI College-Bakersfield	111
47.0607 - Airframe Mechanics and Aircraft Maintenance Technology/Technician	California Aeronautical University	5
	San Joaquin Valley College-Trades Education Center	41

TOP6 or CIP with Title	College	3-Year Average Awards
49.0102 - Airline/Commercial/Professional Pilot and Flight Crew	California Aeronautical University	1
49.0205 - Truck and Bus Driver/Commercial Vehicle Operator and Instructor	Advanced Career Institute	1,227
Grand Total		1,731

Exhibit B3. Postsecondary supply for the agriculture, water, and environmental technologies workforce

TOP6 or CIP with Title	College	3-Year Average Awards
010100 - Agriculture Technology and Sciences, General	Reedley College	2
	Coalinga College	39
	Porterville College	5
010200 - Animal Science	Reedley College	21
	Bakersfield College	30
	College of the Sequoias	34
010230 - Dairy Science	College of the Sequoias	2
010240 - Equine Science	Reedley College	5
	College of the Sequoias	4
010300 - Plant Science	Reedley College	102
	Bakersfield College	13
	Coalinga College	43
	Madera Community College	4
	College of the Sequoias	14
010310 - Agricultural Pest Control Adviser and Operator (Licensed)	Coalinga College	1
010400 - Viticulture, Enology, and Wine Business	Reedley College	0
010900 - Horticulture	Bakersfield College	3
	Madera Community College	0
	College of the Sequoias	3
010910 - Landscape Design and Maintenance	College of the Sequoias	3
010920 - Floriculture /Floristry	College of the Sequoias	0
011200 - Agriculture Business, Sales and Service	Reedley College	76
	Bakersfield College	96
	Lemoore College	1

TOP6 or CIP with Title	College	3-Year Average Awards
	Madera Community College	3
	Porterville College	7
	College of the Sequoias	16
011300 - Food Processing and Related Technologies	Bakersfield College	5
	Coalinga College	1
	College of the Sequoias	1
011400 - Forestry	Reedley College	85
	Bakersfield College	12
011500 - Natural Resources	Reedley College	30
	Fresno City College	7
011510 - Parks and Outdoor Recreation	Reedley College	7
011600 - Agricultural Power Equipment Technology	Reedley College	207
	Bakersfield College	18
	College of the Sequoias	5
01.8301 - Veterinary/Animal Health Technology/Technician and Veterinary Assistant	San Joaquin Valley College-Bakersfield	52
	San Joaquin Valley College-Fresno	55
Grand Total		1,014

Exhibit B4. Postsecondary supply for the business and entrepreneurship workforce

TOP6 or CIP with Title	College	3-Year Average Awards
050100 - Business and Commerce, General	Reedley College	73
	Madera Community College	30
	Porterville College	1
	College of the Sequoias	11
	Taft College	14
050200 - Accounting	Reedley College	22
	Bakersfield College	45
	Clovis Community College	8
	Coalinga College	4
	Fresno City College	38
	Lemoore College	8
	Madera Community College	4

TOP6 or CIP with Title	College	3-Year Average Awards
	Porterville College	2
	College of the Sequoias	21
050500 - Business Administration	Reedley College	88
	Bakersfield College	234
	Cerro Coso Community College	52
	Clovis Community College	144
	Coalinga College	19
	Fresno City College	204
	Lemoore College	55
	Madera Community College	58
	Porterville College	41
	College of the Sequoias	114
	Taft College	33
050600 - Business Management	Reedley College	54
	Cerro Coso Community College	4
	Clovis Community College	1
	Coalinga College	9
	Fresno City College	32
	Lemoore College	18
	Porterville College	5
050630 - Management Development and Supervision	Taft College	3
050640 - Small Business and Entrepreneurship	Reedley College	1
	Bakersfield College	32
	Cerro Coso Community College	1
	Clovis Community College	2
	Porterville College	2
050900 - Marketing and Distribution	Bakersfield College	0
	Fresno City College	14
050940 - Sales and Salesmanship	Bakersfield College	4
051410 - Legal Office Technology	Fresno City College	6
051800 - Customer Service	Bakersfield College	16
059900 - Other Business and Management	Fresno City College	0

TOP6 or CIP with Title	College	3-Year Average Awards
300700 - Cosmetology and Barbering	College of the Sequoias	0
51.3501 - Massage Therapy/Therapeutic Massage	Milan Institute-Bakersfield	15
	Milan Institute-Clovis	3
	Milan Institute-Visalia	17
52.0201 - Business Administration and Management, General	Agape College of Business and Science	2
52.1001 - Human Resources Management/Personnel Administration, General	San Joaquin Valley College-Visalia	67
Grand Total		1,633

Exhibit B5. Postsecondary supply for the education and human development workforce

TOP6 or CIP with Title	College	3-Year Average Awards
080200 - Educational Aide (Teacher Assistant)	Bakersfield College	13
	Fresno City College	37
080900 - Special Education	Fresno City College	2
	College of the Sequoias	1
	Taft College	2
085010 - Sign Language Interpreting	Bakersfield College	5
	Fresno City College	2
086000 - Educational Technology	Bakersfield College	64
089900 - Other Education	Bakersfield College	1
130500 - Child Development/Early Care and Education	Reedley College	98
	Bakersfield College	183
	Cerro Coso Community College	80
	Clovis Community College	91
	Coalinga College	132
	Fresno City College	247
	Lemoore College	247
	Madera Community College	45
	Porterville College	105
	College of the Sequoias	382
Taft College	64	

TOP6 or CIP with Title	College	3-Year Average Awards
130510 - Child and Adolescent Development	Bakersfield College	29
	Clovis Community College	20
	Coalinga College	8
	College of the Sequoias	50
130520 - Children with Special Needs	Reedley College	1
	Clovis Community College	0
	Fresno City College	7
	Madera Community College	0
	College of the Sequoias	0
	Taft College	2
130550 - The School Age Child	Reedley College	0
	Clovis Community College	1
130570 - Foster and Kinship Care	Fresno City College	0
130580 - Child Development Administration and Management	Cerro Coso Community College	5
130590 - Infants and Toddlers	Fresno City College	9
Grand Total		1,933

Exhibit B6. Postsecondary supply for the energy, construction, and utilities workforce

TOP6 or CIP with Title	College	3-Year Average Awards
020100 - Architecture and Architectural Technology	Bakersfield College	11
	Fresno City College	12
	College of the Sequoias	39
093440 - Electrical Systems and Power Transmission	College of the Sequoias	9
093500 - Electro-Mechanical Technology	Bakersfield College	81
	Fresno City College	2
094600 - Environmental Control Technology (HVAC)	Bakersfield College	14
	Coalinga College	17
	Fresno City College	41
	College of the Sequoias	25
095200 - Construction Crafts Technology	Bakersfield College	1
	Fresno City College	48

TOP6 or CIP with Title	College	3-Year Average Awards
	College of the Sequoias	18
095220 - Electrical	Bakersfield College	15
	College of the Sequoias	65
095230 - Plumbing, Pipefitting and Steamfitting	Bakersfield College	9
095250 - Mill and Cabinet Work	Bakersfield College	1
095300 - Drafting Technology	Bakersfield College	7
	Fresno City College	20
095640 - Sheet Metal and Structural Metal	Bakersfield College	12
095700 - Civil and Construction Management Technology	Bakersfield College	7
095720 - Construction Inspection	College of the Sequoias	3
095800 - Water and Wastewater Technology	Clovis Community College	4
	College of the Sequoias	4
46.0302 - Electrician	San Joaquin Valley College-Bakersfield	56
	San Joaquin Valley College-Trades Education Center	66
	UEI College-Bakersfield	116
47.0201 - Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	Institute of Technology	135
	San Joaquin Valley College-Bakersfield	27
	San Joaquin Valley College-Fresno	3
	San Joaquin Valley College-Trades Education Center	11
	San Joaquin Valley College-Visalia	62
	UEI College-Bakersfield	90
52.2001 - Construction Management, General	UEI College-Fresno	134
	San Joaquin Valley College-Visalia	27
Grand Total		1,195

Exhibit B7. Postsecondary supply for the health workforce

TOP6 or CIP with Title	College	3-Year Average Awards
051420 - Medical Office Technology	Reedley College	21
	Fresno City College	21

TOP6 or CIP with Title	College	3-Year Average Awards
	Madera Community College	10
095500 - Laboratory Science Technology	Fresno City College	1
120100 - Health Occupations, General	Bakersfield College	18
	Fresno City College	28
	Taft College	65
120200 - Hospital and Health Care Administration	Clovis Community College	2
120800 - Medical Assisting	Cerro Coso Community College	11
120810 - Clinical Medical Assisting	Cerro Coso Community College	24
	Fresno City College	118
120820 - Administrative Medical Assisting	Cerro Coso Community College	24
121000 - Respiratory Care/Therapy	Fresno City College	20
121800 - Occupational Therapy Technology	Clovis Community College	14
122000 - Speech-Language Pathology and Audiology	Reedley College	2
	Madera Community College	19
122100 - Pharmacy Technology	College of the Sequoias	15
122200 - Physical Therapist Assistant	Bakersfield College	4
	College of the Sequoias	24
122300 - Health Information Technology	Bakersfield College	11
	Fresno City College	4
122310 - Health Information Coding	Fresno City College	10
122500 - Radiologic Technology	Bakersfield College	19
	Fresno City College	32
122800 - Athletic Training and Sports Medicine	College of the Sequoias	5
123010 - Registered Nursing	Bakersfield College	156
	Fresno City College	226
	Lemoore College	36
	Madera Community College	11
	Porterville College	19
	College of the Sequoias	91
123020 - Licensed Vocational Nursing	Reedley College	1
	Bakersfield College	18

TOP6 or CIP with Title	College	3-Year Average Awards
	Cerro Coso Community College	27
	Madera Community College	36
123030 - Certified Nurse Assistant	Reedley College	5
	College of the Sequoias	65
123900 - Psychiatric Technician	Coalinga College	25
	Porterville College	19
124010 - Dental Assistant	Reedley College	37
	Fresno City College	9
124020 - Dental Hygienist	Fresno City College	23
	Taft College	16
125000 - Emergency Medical Services	Bakersfield College	7
	Lemoore College	2
	College of the Sequoias	64
125100 - Paramedic	Bakersfield College	33
	Fresno City College	12
	Lemoore College	19
126000 - Health Professions, Transfer Core Curriculum	Coalinga College	34
	Fresno City College	380
	Lemoore College	116
126100 - Community Health Care Worker	Bakersfield College	9
130600 - Nutrition, Foods, and Culinary Arts	Bakersfield College	7
	Clovis Community College	0
	Fresno City College	6
	College of the Sequoias	2
130620 - Dietetic Services and Management	Bakersfield College	6
	Fresno City College	0
130900 - Gerontology	Fresno City College	5
210440 - Alcohol and Controlled Substances	Cerro Coso Community College	1
	Fresno City College	43
51.0000 - Health Services/Allied Health/Health Sciences, General	San Joaquin Valley College-Visalia	2
51.0601 - Dental Assisting/Assistant	Milan Institute-Visalia	26
	San Joaquin Valley College-Bakersfield	32

TOP6 or CIP with Title	College	3-Year Average Awards
	San Joaquin Valley College-Fresno	38
	San Joaquin Valley College-Visalia	53
	UEI College-Bakersfield	90
	UEI College-Fresno	114
51.0602 - Dental Hygiene/Hygienist	San Joaquin Valley College-Visalia	28
51.0705 - Medical Office Management/Administration	Agape College of Business and Science	1
51.0706 - Health Information/Medical Records Administration/Administrator	Institute of Technology	68
51.0710 - Medical Office Assistant/Specialist	Clovis Adult Education	14
	San Joaquin Valley College-Bakersfield	16
	San Joaquin Valley College-Delano	12
	San Joaquin Valley College-Fresno	11
	San Joaquin Valley College-Hanford Classroom	11
	San Joaquin Valley College-Madera	10
	San Joaquin Valley College-Porterville	14
	San Joaquin Valley College-Visalia	16
51.0713 - Medical Insurance Coding Specialist/Coder	Glendale Career College-North-West College-Bakersfield	1
	San Joaquin Valley College-Visalia	215
	UEI College-Bakersfield	66
	UEI College-Fresno	0
51.0716 - Medical Administrative/Executive Assistant and Medical Secretary	Milan Institute-Visalia	23
51.0801 - Medical/Clinical Assistant	Agape College of Business and Science	11
	California Institute of Medical Science	7
	Clovis Adult Education	5
	Glendale Career College-North-West College-Bakersfield	6
	Institute of Technology	132
	Milan Institute-Bakersfield	2
	Milan Institute-Clovis	8
	Milan Institute-Visalia	62
	San Joaquin Valley College-Bakersfield	75
	San Joaquin Valley College-Delano	48

TOP6 or CIP with Title	College	3-Year Average Awards
	San Joaquin Valley College-Fresno	92
	San Joaquin Valley College-Hanford Classroom	50
	San Joaquin Valley College-Madera	44
	San Joaquin Valley College-Porterville	48
	San Joaquin Valley College-Visalia	183
	UEI College-Bakersfield	271
	UEI College-Fresno	286
51.0802 - Clinical/Medical Laboratory Assistant	California Institute of Medical Science	24
51.0805 - Pharmacy Technician/Assistant	Glendale Career College-North-West College-Bakersfield	1
	Institute of Technology	15
	San Joaquin Valley College-Bakersfield	25
	San Joaquin Valley College-Fresno	15
	San Joaquin Valley College-Visalia	32
	UEI College-Bakersfield	48
	UEI College-Fresno	66
51.0806 - Physical Therapy Assistant	Institute of Technology	55
51.0908 - Respiratory Care Therapy/Therapist	San Joaquin Valley College-Bakersfield	55
	San Joaquin Valley College-Visalia	60
51.0909 - Surgical Technology/Technologist	Glendale Career College-North-West College-Bakersfield	1
	San Joaquin Valley College-Bakersfield	17
	San Joaquin Valley College-Fresno	24
51.0910 - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician	San Joaquin Valley College-Bakersfield	30
51.1009 - Phlebotomy Technician/Phlebotomist	Agape College of Business and Science	4
51.2602 - Home Health Aide/Home Attendant	Clovis Adult Education	6
51.3801 - Registered Nursing/Registered Nurse	Glendale Career College-North-West College-Bakersfield	0
	San Joaquin Valley College-Visalia	59
51.3901 - Licensed Practical/Vocational Nurse Training	Clovis Adult Education	58
	San Joaquin Valley College-Bakersfield	32
	San Joaquin Valley College-Visalia	35

TOP6 or CIP with Title	College	3-Year Average Awards
51.3902 - Nursing Assistant/Aide and Patient Care Assistant/Aide	Agape College of Business and Science	1
	Clovis Adult Education	54
	Institute of Technology	31
Grand Total		5,029

Exhibit B8. Postsecondary supply for the information and communications technologies/digital media workforce

TOP6 or CIP with Title	College	3-Year Average Awards
051400 - Office Technology/Office Computer Applications	Reedley College	46
	Bakersfield College	13
	Cerro Coso Community College	12
	Coalinga College	3
	Fresno City College	13
	Lemoore College	1
	Madera Community College	11
	Taft College	4
060200 - Journalism	Bakersfield College	11
	Fresno City College	9
	College of the Sequoias	5
061220 - Film Production	Porterville College	4
061400 - Digital Media	Cerro Coso Community College	21
	Fresno City College	1
061410 - Multimedia	Bakersfield College	13
061430 - Website Design and Development	Bakersfield College	2
	Cerro Coso Community College	6
	Clovis Community College	4
070100 - Information Technology, General	Reedley College	5
	Bakersfield College	1
	Cerro Coso Community College	1
	Lemoore College	0
	Porterville College	9
070200 - Computer Information Systems	Reedley College	6

TOP6 or CIP with Title	College	3-Year Average Awards
	Cerro Coso Community College	65
	Clovis Community College	1
	Fresno City College	35
	Porterville College	5
	College of the Sequoias	9
070210 - Software Applications	Coalinga College	5
	Lemoore College	19
070700 - Computer Software Development	Clovis Community College	3
	Lemoore College	1
070710 - Computer Programming	Reedley College	25
	Clovis Community College	3
	Lemoore College	3
070800 - Computer Infrastructure and Support	Bakersfield College	6
	Lemoore College	2
070810 - Computer Networking	Reedley College	5
	Cerro Coso Community College	32
	Clovis Community College	10
	Fresno City College	21
	Lemoore College	3
	College of the Sequoias	18
070820 - Computer Support	Reedley College	6
	Clovis Community College	2
	Madera Community College	1
070900 - World Wide Web Administration	Fresno City College	9
093430 - Telecommunications Technology	Fresno City College	8
100500 - Commercial Music	Bakersfield College	16
	Clovis Community College	2
	Fresno City College	18
	College of the Sequoias	5
101200 - Applied Photography	Bakersfield College	7
	Fresno City College	46
101300 - Commercial Art	Porterville College	3

TOP6 or CIP with Title	College	3-Year Average Awards
103000 - Graphic Art and Design	Bakersfield College	16
	Fresno City College	21
	College of the Sequoias	6
11.0103 - Information Technology	San Joaquin Valley College-Visalia	60
52.0401 - Administrative Assistant and Secretarial Science, General	Clovis Adult Education	9
	Milan Institute-Visalia	4
52.0408 - General Office Occupations and Clerical Services	Agape College of Business and Science	1
	San Joaquin Valley College-Bakersfield	13
	San Joaquin Valley College-Delano	4
	San Joaquin Valley College-Fresno	9
	San Joaquin Valley College-Hanford Classroom	4
	San Joaquin Valley College-Madera	3
	San Joaquin Valley College-Porterville	6
	San Joaquin Valley College-Visalia	44
	UEI College-Bakersfield	36
	UEI College-Fresno	20
Grand Total		852

Exhibit B9. Postsecondary supply for the public safety workforce

TOP6 or CIP with Title	College	3-Year Average Awards
210500 - Administration of Justice	Reedley College	58
	Bakersfield College	182
	Cerro Coso Community College	28
	Clovis Community College	50
	Coalinga College	21
	Fresno City College	144
	Lemoore College	55
	Madera Community College	31
	Porterville College	36
	College of the Sequoias	103

TOP6 or CIP with Title	College	3-Year Average Awards
	Taft College	33
210510 - Corrections	Reedley College	10
	Bakersfield College	2
	Clovis Community College	1
	Coalinga College	5
	Fresno City College	10
	Lemoore College	11
	Madera Community College	2
	College of the Sequoias	7
	Taft College	0
210540 - Forensics, Evidence, and Investigation	Fresno City College	2
210550 - Police Academy	Fresno City College	20
	Porterville College	11
	College of the Sequoias	57
213300 - Fire Technology	Reedley College	9
	Bakersfield College	54
	Fresno City College	36
	Porterville College	5
	College of the Sequoias	17
213310 - Wildland Fire Technology	Reedley College	2
	Bakersfield College	1
213350 - Fire Academy	Bakersfield College	0
	Fresno City College	45
	College of the Sequoias	32
219900 - Other Public and Protective Services	Porterville College	8
43.0102 - Corrections	San Joaquin Valley College-Bakersfield	8
	San Joaquin Valley College-Fresno	7
	San Joaquin Valley College-Visalia	17
43.0107 - Criminal Justice/Police Science	Institute of Technology	22
43.0109 - Security and Loss Prevention Services	UEI College-Bakersfield	30
	UEI College-Fresno	43

TOP6 or CIP with Title	College	3-Year Average Awards
Grand Total		1,218

Exhibit B10. Postsecondary supply for the retail, hospitality, and tourism workforce

TOP6 or CIP with Title	College	3-Year Average Awards
050650 - Retail Store Operations and Management	Bakersfield College	0
	Coalinga College	8
	Fresno City College	45
	Lemoore College	10
051440 - Office Management	Bakersfield College	8
130300 - Fashion	College of the Sequoias	12
130310 - Fashion Design	College of the Sequoias	9
130320 - Fashion Merchandising	Fresno City College	4
	College of the Sequoias	10
130630 - Culinary Arts	Bakersfield College	23
	Fresno City College	2
	Lemoore College	4
	College of the Sequoias	22
130700 - Hospitality	Lemoore College	4
130710 - Restaurant and Food Services and Management	Fresno City College	5
	Lemoore College	16
130720 - Lodging Management	Lemoore College	1
130730 - Resort and Club Management	Lemoore College	4
12.0401 - Cosmetology/Cosmetologist, General	Estes Institute of Cosmetology Arts and Science	22
	Institute of Technology	16
	Lawrence & Company College of Cosmetology	36
	Lyle's College of Beauty	27
	Milan Institute-Bakersfield	75
	Milan Institute-Clovis	42
	Milan Institute-Visalia	68
	Paul Mitchell the School-Fresno	94
	Princess Institute of Beauty	20

TOP6 or CIP with Title	College	3-Year Average Awards
12.0402 - Barbering/Barber	Institute of Technology	19
	Lawrence & Company College of Cosmetology	5
	Milan Institute-Bakersfield	10
	Milan Institute-Clovis	39
	Paul Mitchell the School-Fresno	21
12.0409 - Aesthetician/Esthetician and Skin Care Specialist	Lawrence & Company College of Cosmetology	17
	Lyle's College of Beauty	45
	Milan Institute-Bakersfield	106
	Milan Institute-Clovis	254
	Milan Institute-Visalia	27
12.0410 - Nail Technician/Specialist and Manicurist	Princess Institute of Beauty	8
	Estes Institute of Cosmetology Arts and Science	20
	Lawrence & Company College of Cosmetology	27
	Lyle's College of Beauty	75
	Milan Institute-Bakersfield	11
	Milan Institute-Clovis	7
	Milan Institute-Visalia	9
12.0501 - Baking and Pastry Arts/Baker/Pastry Chef	Princess Institute of Beauty	11
	Institute of Technology	33
Grand Total		1,331

Appendix C: Occupational Requirements and Educational Attainment for the Top Occupations in Each Sector

Exhibit C1. Advanced manufacturing educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Chemical Technicians	Associate degree	None	Moderate-term on-the-job training	33.4%
Computer Numerically Controlled Tool Operators	High school diploma or equivalent	None	Moderate-term on-the-job training	38.1%
Computer, Automated Teller, and Office Machine Repairers	Some college, no degree	None	Short-term on-the-job training	47.6%
Electrical and Electronic Engineering Technologists and Technicians	Associate degree	None	None	58.8%
Electrical and Electronics Repairers, Commercial and Industrial Equipment	Postsecondary nondegree award	None	Long-term on-the-job training	54.3%
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	High school diploma or equivalent	None	Moderate-term on-the-job training	29.6%
Engineering Technologists and Technicians, Except Drafters, All Other	Associate degree	None	None	47.1%
First-Line Supervisors of Production and Operating Workers	High school diploma or equivalent	Less than 5 years	None	34.5%
Industrial Machinery Mechanics	High school diploma or equivalent	None	Long-term on-the-job training	44.2%
Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	None	Moderate-term on-the-job training	37.0%
Machinists	High school diploma or equivalent	None	Long-term on-the-job training	40.4%
Maintenance Workers, Machinery	High school diploma or equivalent	None	Long-term on-the-job training	37.3%
Molders, Shapers, and Casters, Except Metal and Plastic	High school diploma or equivalent	None	Long-term on-the-job training	24.4%
Printing Press Operators	High school diploma or equivalent	None	Moderate-term on-the-job training	32.1%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Welders, Cutters, Solderers, and Brazers	High school diploma or equivalent	None	Moderate-term on-the-job training	30.6%

Exhibit C2. Advanced transportation and logistics educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Aircraft Mechanics and Service Technicians	Postsecondary nondegree award	None	None	58.2%
Automotive Body and Related Repairers	High school diploma or equivalent	None	Long-term on-the-job training	23.5%
Automotive Service Technicians and Mechanics	Postsecondary nondegree award	None	Short-term on-the-job training	36.6%
Avionics Technicians	Associate degree	None	None	63.2%
Bus and Truck Mechanics and Diesel Engine Specialists	High school diploma or equivalent	None	Long-term on-the-job training	38.2%
Bus Drivers, Transit and Intercity	High school diploma or equivalent	None	Moderate-term on-the-job training	37.0%
Cargo and Freight Agents	High school diploma or equivalent	None	Short-term on-the-job training	42.5%
Commercial Pilots	High school diploma or equivalent	None	Moderate-term on-the-job training	18.1%
First-Line Supervisors of Mechanics, Installers, and Repairers	High school diploma or equivalent	Less than 5 years	None	42.3%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	High school diploma or equivalent	Less than 5 years	None	38.9%
Heavy and Tractor-Trailer Truck Drivers	Postsecondary nondegree award	None	Short-term on-the-job training	29.8%
Logisticians	Bachelor's degree	None	None	32.1%
Outdoor Power Equipment and Other Small Engine Mechanics	High school diploma or equivalent	None	Moderate-term on-the-job training	30.2%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Railroad Conductors and Yardmasters	High school diploma or equivalent	None	Moderate-term on-the-job training	44.0%
Transportation, Storage, and Distribution Managers	High school diploma or equivalent	5 years or more	None	34.2%

Exhibit C3. Agriculture, water, and environmental technologies educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Agricultural Inspectors	Bachelor's degree	None	Moderate-term on-the-job training	29.3%
Animal Trainers	High school diploma or equivalent	None	Moderate-term on-the-job training	34.0%
Buyers and Purchasing Agents	Bachelor's degree	None	Moderate-term on-the-job training	32.5%
Cost Estimators	Bachelor's degree	None	Moderate-term on-the-job training	35.8%
Environmental Science and Protection Technicians, Including Health	Associate degree	None	None	32.8%
Farm Equipment Mechanics and Service Technicians	High school diploma or equivalent	None	Long-term on-the-job training	38.7%
Farmers, Ranchers, and Other Agricultural Managers	High school diploma or equivalent	5 years or more	None	29.3%
First-Line Supervisors of Farming, Fishing, and Forestry Workers	High school diploma or equivalent	Less than 5 years	None	22.1%
Food Science Technicians	Associate degree	None	Moderate-term on-the-job training	39.8%
Forest and Conservation Technicians	Associate degree	None	None	33.4%
Forest and Conservation Workers	High school diploma or equivalent	None	Moderate-term on-the-job training	22.5%
Mobile Heavy Equipment Mechanics, Except Engines	High school diploma or equivalent	None	Long-term on-the-job training	38.7%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High school diploma or equivalent	None	Moderate-term on-the-job training	29.1%
Veterinary Assistants and Laboratory Animal Caretakers	High school diploma or equivalent	None	Short-term on-the-job training	40.4%
Veterinary Technologists and Technicians	Associate degree	None	None	57.0%

Exhibit C4. Business and entrepreneurship educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Administrative Services Managers	Bachelor's degree	Less than 5 years	None	32.5%
Bookkeeping, Accounting, and Auditing Clerks	Some college, no degree	None	Moderate-term on-the-job training	50.5%
Court, Municipal, and License Clerks	High school diploma or equivalent	None	Long-term on-the-job training	43.5%
Customer Service Representatives	High school diploma or equivalent	None	Short-term on-the-job training	41.6%
First-Line Supervisors of Non-Retail Sales Workers	High school diploma or equivalent	Less than 5 years	None	30.9%
First-Line Supervisors of Office and Administrative Support Workers	High school diploma or equivalent	Less than 5 years	None	39.5%
General and Operations Managers	Bachelor's degree	5 years or more	None	32.8%
Insurance Sales Agents	High school diploma or equivalent	None	Moderate-term on-the-job training	36.6%
Paralegals and Legal Assistants	Associate degree	None	None	39.4%
Payroll and Timekeeping Clerks	High school diploma or equivalent	None	Moderate-term on-the-job training	46.8%
Production, Planning, and Expediting Clerks	High school diploma or equivalent	None	Moderate-term on-the-job training	36.0%
Property, Real Estate, and Community Association Managers	High school diploma or equivalent	Less than 5 years	None	33.6%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Real Estate Sales Agents	High school diploma or equivalent	None	Moderate-term on-the-job training	34.1%
Receptionists and Information Clerks	High school diploma or equivalent	None	Short-term on-the-job training	45.5%
Skincare Specialists	Postsecondary nondegree award	None	None	52.6%

Exhibit C5. Energy, construction, and utilities educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Architectural and Civil Drafters	Associate degree	None	None	60.5%
Carpenters	High school diploma or equivalent	None	Apprenticeship	23.7%
Civil Engineering Technologists and Technicians	Associate degree	None	None	47.1%
Construction and Building Inspectors	High school diploma or equivalent	5 years or more	Moderate-term on-the-job training	42.4%
Electrical Power-Line Installers and Repairers	High school diploma or equivalent	None	Long-term on-the-job training	47.4%
Electricians	High school diploma or equivalent	None	Apprenticeship	45.1%
First-Line Supervisors of Construction Trades and Extraction Workers	High school diploma or equivalent	5 years or more	None	29.5%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Postsecondary nondegree award	None	Long-term on-the-job training	42.3%
Installation, Maintenance, and Repair Workers, All Other	High school diploma or equivalent	None	Moderate-term on-the-job training	34.5%
Operating Engineers and Other Construction Equipment Operators	High school diploma or equivalent	None	Moderate-term on-the-job training	24.8%
Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent	None	Apprenticeship	32.7%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Sheet Metal Workers	High school diploma or equivalent	None	Apprenticeship	31.7%
Solar Photovoltaic Installers	High school diploma or equivalent	None	Moderate-term on-the-job training	37.0%
Telecommunications Equipment Installers and Repairers, Except Line Installers	Postsecondary nondegree award	None	Moderate-term on-the-job training	48.0%
Water and Wastewater Treatment Plant and System Operators	High school diploma or equivalent	None	Long-term on-the-job training	40.5%

Exhibit C6. Education educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Childcare Workers	High school diploma or equivalent	None	Short-term on-the-job training	35.0%
Interpreters and Translators	Bachelor's degree	None	None	31.4%
Kindergarten Teachers, Except Special Education	Bachelor's degree	None	None	29.8%
Library Technicians	Postsecondary nondegree award	None	None	27.8%
Preschool Teachers, Except Special Education	Associate degree	None	None	29.8%
Teaching Assistants, Except Postsecondary	Some college, no degree	None	None	35.6%
Teaching Assistants, Postsecondary	Bachelor's degree	None	None	35.6%

Exhibit C7. Health educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Clinical Laboratory Technologists and Technicians	Bachelor's degree	None	None	36.3%
Dental Assistants	Postsecondary nondegree award	None	None	55.9%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Emergency Medical Technicians	Postsecondary nondegree award	None	None	57.6%
Health Technologists and Technicians, All Other	Postsecondary nondegree award	None	None	46.8%
Healthcare Support Workers, All Other	High school diploma or equivalent	None	None	41.8%
Home Health and Personal Care Aides	High school diploma or equivalent	None	Short-term on-the-job training	33.1%
Licensed Practical and Licensed Vocational Nurses	Postsecondary nondegree award	None	None	73.2%
Massage Therapists	Postsecondary nondegree award	None	None	51.2%
Medical Assistants	Postsecondary nondegree award	None	None	62.4%
Medical Secretaries and Administrative Assistants	High school diploma or equivalent	None	Moderate-term on-the-job training	50.2%
Nursing Assistants	Postsecondary nondegree award	None	None	42.7%
Pharmacy Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training	51.4%
Phlebotomists	Postsecondary nondegree award	None	None	58.0%
Registered Nurses	Bachelor's degree	None	None	29.5%
Social and Human Service Assistants	High school diploma or equivalent	None	Short-term on-the-job training	33.8%

Exhibit C8. ICT/digital media educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Audio and Video Technicians	Postsecondary nondegree award	None	Short-term on-the-job training	39.2%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Computer Network Architects	Bachelor's degree	5 years or more	None	36.5%
Computer Network Support Specialists	Associate degree	None	None	38.5%
Computer User Support Specialists	Some college, no degree	None	None	38.5%
Data Entry Keyers	High school diploma or equivalent	None	Short-term on-the-job training	43.8%
Executive Secretaries and Executive Administrative Assistants	High school diploma or equivalent	Less than 5 years	None	42.0%
Network and Computer Systems Administrators	Bachelor's degree	None	None	38.1%
Office Clerks, General	High school diploma or equivalent	None	Short-term on-the-job training	42.7%
Photographers	High school diploma or equivalent	None	Moderate-term on-the-job training	33.3%
Procurement Clerks	High school diploma or equivalent	None	Moderate-term on-the-job training	38.5%
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	High school diploma or equivalent	None	Short-term on-the-job training	43.5%
Surveying and Mapping Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training	55.2%
Telecommunications Line Installers and Repairers	High school diploma or equivalent	None	Long-term on-the-job training	45.0%
Web and Digital Interface Designers	Bachelor's degree	None	None	20.6%
Word Processors and Typists	High school diploma or equivalent	None	Short-term on-the-job training	46.0%

Exhibit C9. Public safety educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Correctional Officers and Jailers	High school diploma or equivalent	None	Moderate-term on-the-job training	47.7%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Detectives and Criminal Investigators	High school diploma or equivalent	Less than 5 years	Moderate-term on-the-job training	28.2%
Firefighters	Postsecondary nondegree award	None	Long-term on-the-job training	58.2%
First-Line Supervisors of Correctional Officers	High school diploma or equivalent	Less than 5 years	None	43.8%
First-Line Supervisors of Firefighting and Prevention Workers	Postsecondary nondegree award	Less than 5 years	Moderate-term on-the-job training	53.8%
First-Line Supervisors of Police and Detectives	High school diploma or equivalent	Less than 5 years	Moderate-term on-the-job training	37.1%
First-Line Supervisors of Security Workers	High school diploma or equivalent	Less than 5 years	None	45.5%
Forensic Science Technicians	Bachelor's degree	None	Moderate-term on-the-job training	33.4%
Gambling Surveillance Officers and Gambling Investigators	High school diploma or equivalent	Less than 5 years	Moderate-term on-the-job training	39.4%
Life, Physical, and Social Science Technicians, All Other	Associate degree	None	None	33.4%
Police and Sheriff's Patrol Officers	High school diploma or equivalent	None	Moderate-term on-the-job training	44.3%
Private Detectives and Investigators	High school diploma or equivalent	Less than 5 years	Moderate-term on-the-job training	31.4%
Public Safety Telecommunicators	High school diploma or equivalent	None	Moderate-term on-the-job training	52.7%
Security Guards	High school diploma or equivalent	None	Short-term on-the-job training	39.4%
Transportation Security Screeners	High school diploma or equivalent	None	Short-term on-the-job training	40.6%

Exhibit C10. Retail, hospitality, and tourism educational attainment

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Chefs and Head Cooks	High school diploma or equivalent	5 years or more	None	36.6%
Exercise Trainers and Group Fitness Instructors	High school diploma or equivalent	None	Short-term on-the-job training	28.5%
First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	High school diploma or equivalent	Less than 5 years	None	42.0%
First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	Less than 5 years	None	37.5%
First-Line Supervisors of Housekeeping and Janitorial Workers	High school diploma or equivalent	Less than 5 years	None	33.2%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	High school diploma or equivalent	Less than 5 years	None	29.6%
First-Line Supervisors of Personal Service Workers	High school diploma or equivalent	Less than 5 years	None	42.0%
First-Line Supervisors of Retail Sales Workers	High school diploma or equivalent	Less than 5 years	None	36.9%
Food Service Managers	High school diploma or equivalent	Less than 5 years	None	36.7%
Hairdressers, Hairstylists, and Cosmetologists	Postsecondary nondegree award	None	None	42.3%
Lodging Managers	High school diploma or equivalent	Less than 5 years	None	33.1%
Manicurists and Pedicurists	Postsecondary nondegree award	None	None	23.1%
Reservation and Transportation Ticket Agents and Travel Clerks	High school diploma or equivalent	None	Short-term on-the-job training	42.4%
Tour and Travel Guides	High school diploma or equivalent	None	Moderate-term on-the-job training	29.5%
Travel Agents	High school diploma or equivalent	None	Moderate-term on-the-job training	38.1%



Important Disclaimers

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 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.

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