



North Central Valley/North Mother Lode Subregion

2026 Overview

This report is a publication of the Centers of Excellence for Labor Market Research and was prepared by the Central Valley/Mother Lode Center of Excellence for Labor Market Research, hosted by State Center Community College District and funded through the California Community Colleges' Workforce and Economic Development Division.



POWERED BY



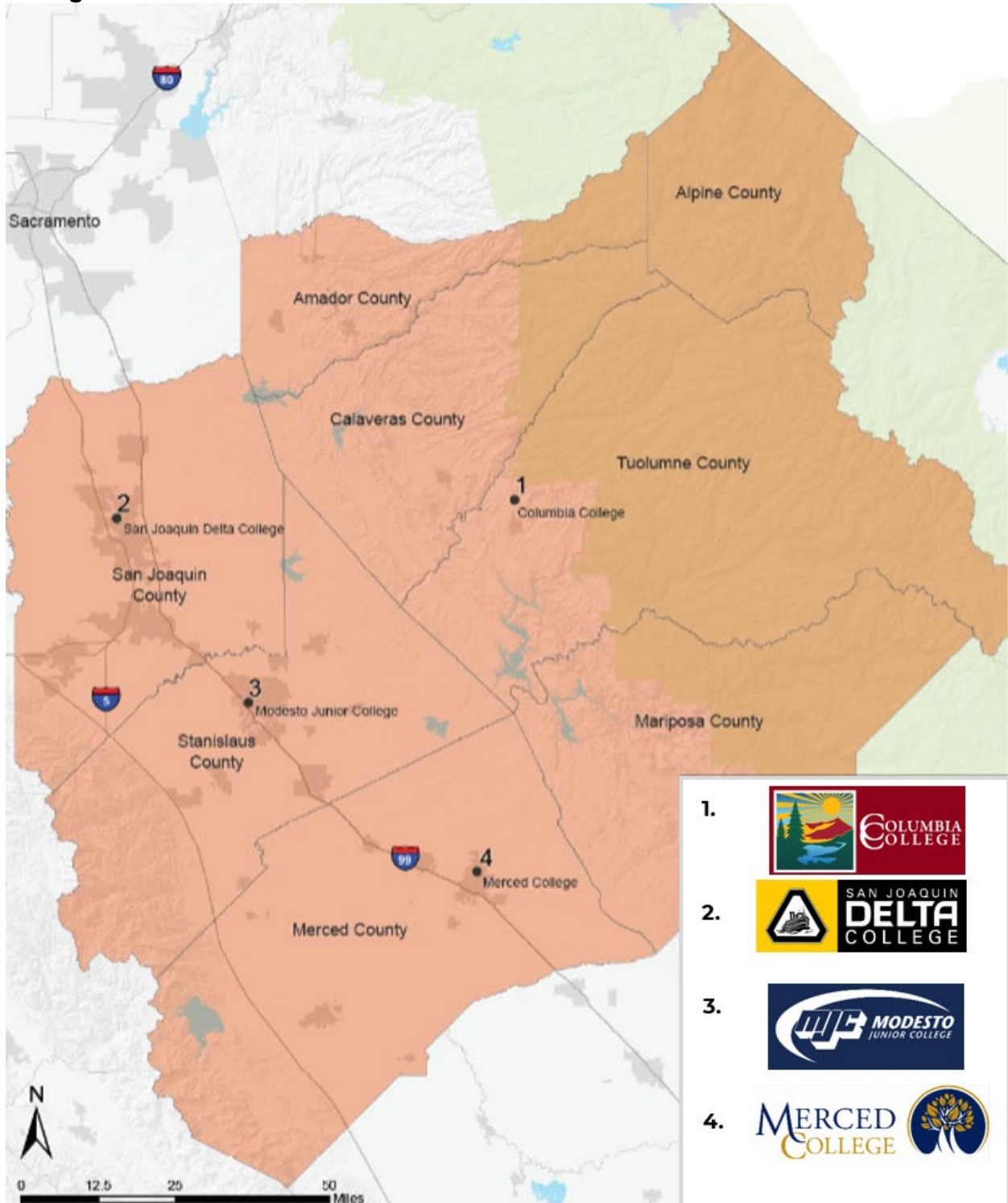
California
Community
Colleges

Table of Contents

North Central Valley/North Mother Lode College Area.....	3
Executive Summary.....	4
Introduction.....	5
Methodology.....	5
Subregional Overview.....	6
Residential Population.....	6
Demographics.....	6
Educational Attainment.....	9
Labor Force & Employment.....	10
K-12 Enrollment and Demographics.....	11
Subregional K-12 Enrollment.....	11
High School Graduation Demographics.....	12
CE Enrollment and Demographics.....	13
Sector Composition.....	16
Middle-Skill Jobs Composition.....	17
Gap Analysis Summary.....	18
Advanced Manufacturing.....	20
Advanced Transportation and Logistics.....	26
Agriculture, Water & Environmental Technologies.....	32
Business & Entrepreneurship.....	38
Education.....	44
Energy, Construction & Utilities.....	49
Health.....	55
ICT/Digital Media.....	61
Public Safety.....	67
Retail, Hospitality & Tourism.....	72
Conclusion.....	78
Program Development Recommendations.....	79
Appendix A: Methodology & Data Sources.....	81
Data Sources.....	81
Key Terms and Concepts.....	82
Appendix B: Postsecondary Supply for Each Sector.....	83
Appendix C: Occupational Requirements and Educational Attainment for the Top Occupations in Each Sector.....	94

North Central Valley/North Mother Lode College Area

Exhibit 1. Map of community colleges in the North Central Valley/North 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 North Central Valley/North Mother Lode (CVML-N) 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 across the 10 sectors detailed in this report are projected to have more than 35,500 job openings annually in the subregion over the next five years. Subregional postsecondary institutions have conferred an average of 6,783 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 28,750 workers in the subregion. The following three sectors have the largest gaps in workforce supply in the subregion:

- Health: 8,247 workers
- Business and Entrepreneurship: 4,231 workers
- Advanced Transportation and Logistics: 3,902 workers

Sectors with the smallest gaps in workforce supply include public safety (a shortage of 1,174 workers), advanced manufacturing (a shortage of 345 workers), energy, construction, and utilities (a shortage of 1,762 workers). It should be noted that these sectors account for a smaller share of demand, resulting in smaller supply gaps. On average, the sectors issuing the most awards each year are the health sector (2,023 awards), the business and entrepreneurship sector (1,012 awards), and retail, hospitality, and tourism (989 awards). The advanced transportation and logistics sector has issued the fewest awards (293 awards), followed by advanced manufacturing (245 awards).

Other findings:

- The health sector is projected to have the most demand for middle-skill workers over the next five years, accounting for nearly 29% of the projected middle-skill workforce demand in the subregion.
- Advanced transportation and logistics, ICT/digital media, and agriculture, water, and environmental technologies, and advanced manufacturing 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 agriculture and advanced manufacturing.
- Retail, hospitality, and tourism, public safety, and education 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 eight-county North Central Valley/North 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.

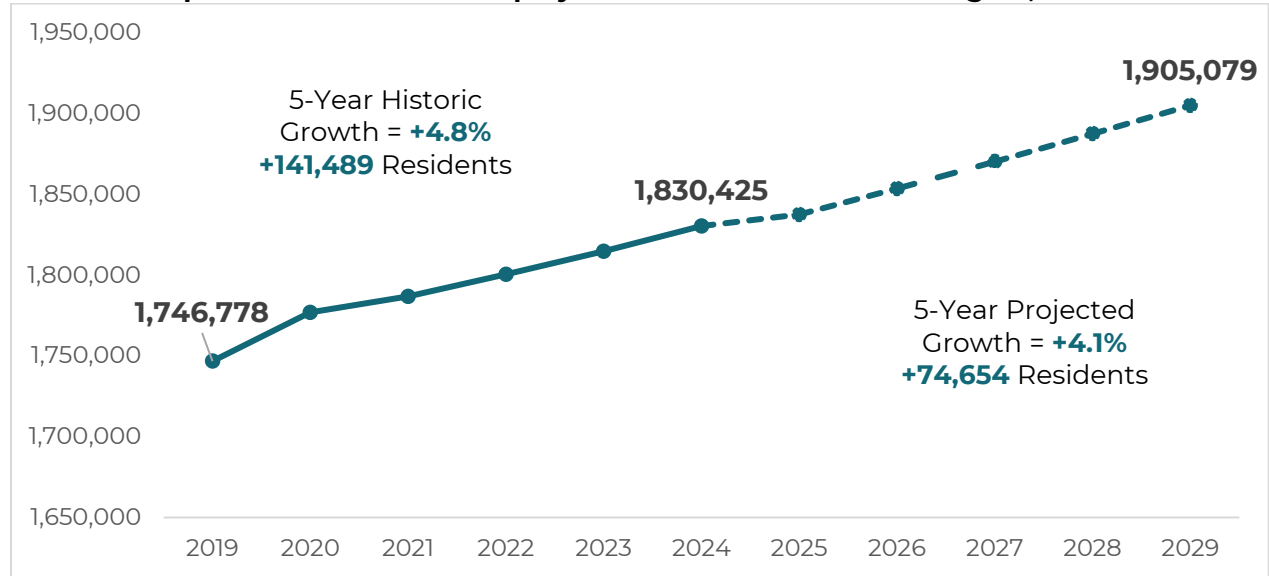
² The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>. Please note 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-N subregion was home to approximately 1.83 million residents in 2024 (Exhibit 2). Between 2019 and 2024, the subregion added over 83,600 residents. Between 2024 and 2029, the subregion is projected to grow by 4.1%, adding nearly 74,700 new residents, for a total of nearly 1.91 million residents.

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



Demographics

The CVML-N subregion's gender composition matches the state's. The population is equally divided between men and women. Exhibit 3 shows projected changes in the CVML-N subregion's race/ethnicity demographics by 2029. The largest group in the subregion by race/ethnicity is White, Hispanic, totaling under 750,000 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 63,200 residents over the next five years. Rapid growth rates are projected for residents identifying as Asian, non-Hispanic (23% growth), two or more races, Hispanic, 17% growth; and Native Hawaiian or Pacific Islander, non-Hispanic (12% growth).

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

- White, Hispanic 68,189, representing 9% growth
- Asian, non-Hispanic residents, an increase of 51,246, 23% growth
- Two or More Races, Hispanic, 5,525, 17% growth

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

Race/Ethnicity	2024	2029	5-Year Change	5-Year % Change
White, Hispanic	746,548	814,737	68,189	9%
White, Non-Hispanic	594,466	531,265	(63,201)	(11%)

Race/Ethnicity	2024	2029	5-Year Change	5-Year % Change
Asian, Non-Hispanic	220,273	271,519	51,246	23%
Black, Non-Hispanic	83,098	84,857	1,759	2%
Two or More Races, Non-Hispanic	56,793	60,653	3,860	7%
Two or More Races, Hispanic	33,209	38,734	5,525	17%
American Indian or Alaskan Native, Hispanic	32,228	34,764	2,536	8%
Asian, Hispanic	20,248	21,827	1,579	8%
Black, Hispanic	18,870	20,493	1,623	9%
Native Hawaiian or Pacific Islander, Non-Hispanic	11,145	12,484	1,339	12%
American Indian or Alaskan Native, Non-Hispanic	9,673	9,506	(167)	(2%)
Native Hawaiian or Pacific Islander, Hispanic	3,874	4,242	368	9%
Total	1,830,425	1,905,079	74,654	4%

Applying an equity lens to the data by examining cohort percentage reveals that residents identifying as Hispanic represented 47% of the total population in 2024. The Black population's overall percentage representation of 5% has remained stable and is projected to do so through 2029. The White residential cohort is projected to decline by more than 63,200 residents, or approximately 11% (Exhibit 4).

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

Race/Ethnicity	2024	2029	Change	% Change	% of Cohort
Hispanic	854,977	934,795	79,818	9%	47%
White	594,466	531,265	(63,201)	(11%)	32%
Asian	220,273	271,519	51,246	23%	12%
Black	83,098	84,857	1,759	2%	5%
Two or More Races	56,793	60,653	3,860	7%	3%
Native Hawaiian or Pacific Islander	11,145	12,484	1,339	12%	1%
American Indian or Alaskan Native	9,673	9,506	(167)	(2%)	1%
Total	1,830,425	1,905,079	74,654	4%	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 3% 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 9%, representing an increase of nearly 10,600 residents.

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

Age Cohort	2024	2029	Change	% Change	2024 % of Cohort
Under 5 years	112,347	115,871	3,524	3%	6%
5 to 9 years	128,085	120,153	(7,932)	(6%)	7%
10 to 14 years	134,635	135,736	1,101	1%	7%
15 to 19 years	139,835	136,325	(3,510)	(3%)	8%
20 to 24 years	122,340	132,928	10,588	9%	7%
25 to 29 years	119,540	125,021	5,481	5%	7%
30 to 34 years	130,527	126,193	(4,334)	(3%)	7%
35 to 39 years	128,098	140,732	12,634	10%	7%
40 to 44 years	124,753	136,788	12,035	10%	7%
45 to 49 years	109,464	125,787	16,323	15%	6%
50 to 54 years	103,743	109,543	5,800	6%	6%
55 to 59 years	99,611	101,921	2,310	2%	5%
60 to 64 years	100,504	95,532	(4,972)	(5%)	5%
65 to 69 years	89,764	92,812	3,048	3%	5%
70 to 74 years	72,350	79,023	6,673	9%	4%
75 to 79 years	54,415	60,386	5,971	11%	3%
80 to 84 years	32,714	40,502	7,788	24%	2%
85 years and over	27,700	29,827	2,127	8%	2%
TOTAL	1,830,425	1,905,079	74,654	4%	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-N subregion, 2024–2029

Age Cohort	2024	2029	Change	% Change
20 to 54 years	838,465	896,992	58,527	7%
55+ years	477,058	500,003	22,945	3%

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 projects that over one-quarter of the population may exit the workforce by 2029. However, many workers are opting to work until age 65 (Exhibit 7).

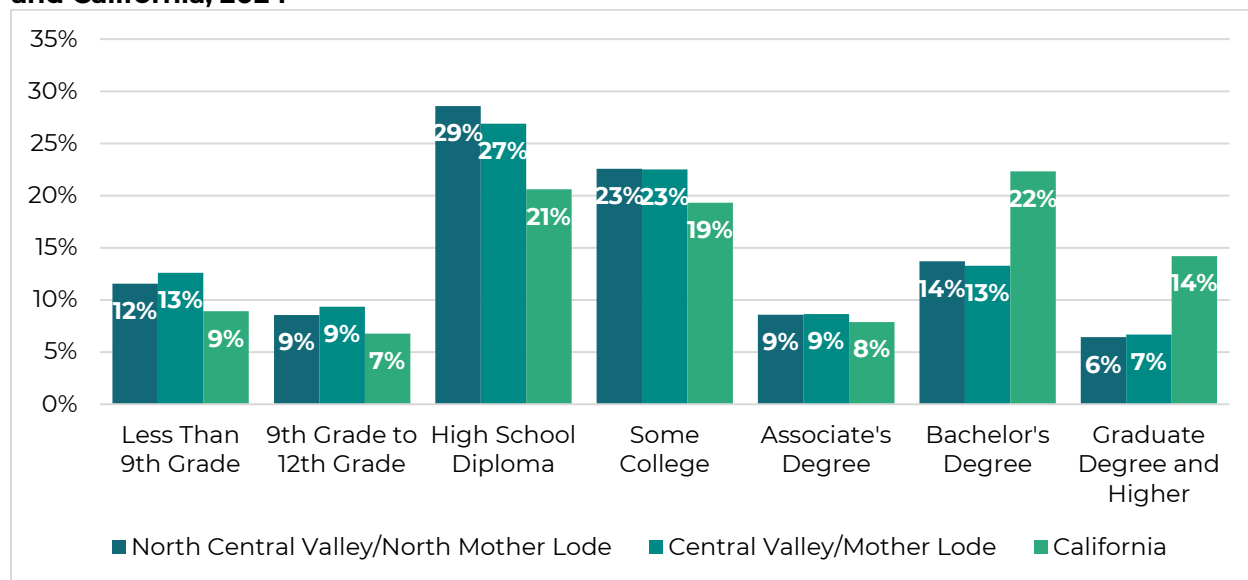
Exhibit 7. Projected change in age cohorts, grouped by young children, school age, working age, or retiring in the CVML-N subregion, 2024–2029

Category	Age Cohort	2024 Population	2029 Population	Change	% Change	2024 % of Cohort	2029 % of Cohort
Young Children	Under 5 years	112,347	115,871	3,524	3%	6%	6%
School Age	5 to 24 years	524,895	525,141	246	0%	29%	28%
Working Age	25 to 54 years	716,125	764,064	47,939	7%	39%	40%
Retiring	55 Plus	477,058	500,003	22,945	5%	26%	26%
Total		1,830,425	1,905,079	74,654	4%	100%	100%
Still Working	55 to 64	200,115	197,453	(2,662)	(1%)	11%	10%
Retiring	65 Plus	276,943	302,550	25,607	9%	15%	16%

Educational Attainment

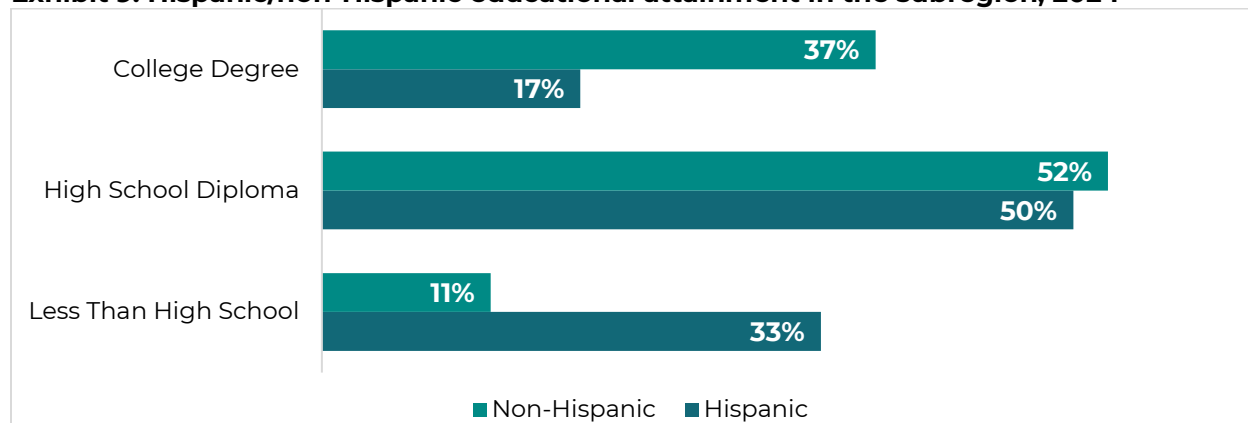
Exhibit 8 summarizes educational attainment data for the population's residents aged 25 and older. The CVML-N subregion continues to trail the state in bachelor's degree attainment, with 14% of the subregional adult population holding a bachelor's degree, compared to 22% in the state as a whole. Regarding 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, 29% compared to 21% in the state. A slightly greater proportion of the subregion has completed some college, 23%, 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, 12% of residents have less than a 9th grade education, compared to 9% in the state.

Exhibit 8. Educational attainment comparison of the CVML-N Subregion, CVML-Region, and California, 2024



In the subregion, 37% of the non-Hispanic adult population has a college degree, compared to 17% of the Hispanic population (Exhibit 9). A comparison of this data to the 2025 CVML Overview revealed a 1-percentage-point decrease for both groups. As observed in the 2025 CVML Overview, a greater proportion of Hispanic residents have completed less than a high school education, 33%, compared to non-Hispanic residents, 11%.

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-N subregion increased by 42,580 workers over the last five years, or 5.6% (Exhibit 10). Employment grew by 32,800 workers, from 715,000 workers in 2019 to 747,900 workers in 2024. Unemployment rose from 6.1% in 2019 to 7.0% in 2024.

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

Metric	2019	2024	5-Year Change
Labor Force	761,870	804,450	42,580
Employment	715,120	747,920	32,800
Unemployment	46,760	56,540	9,780
Unemployment Rate	6.1%	7.0%	0.9%

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

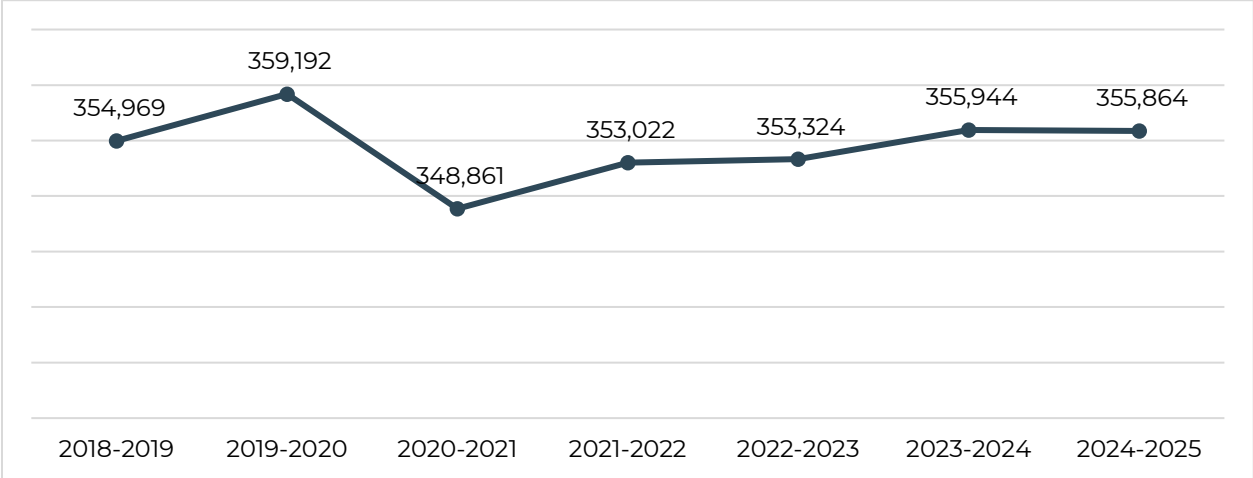
Metric	2019	2024	5-Year Change
Labor Force	19,420,100	19,644,100	224,000
Employment	18,621,900	18,600,900	(21,000)
Unemployment	798,200	1,043,100	244,900
Unemployment Rate	4.1%	5.3%	1.2%

K-12 Enrollment and Demographics

Subregional K-12 Enrollment

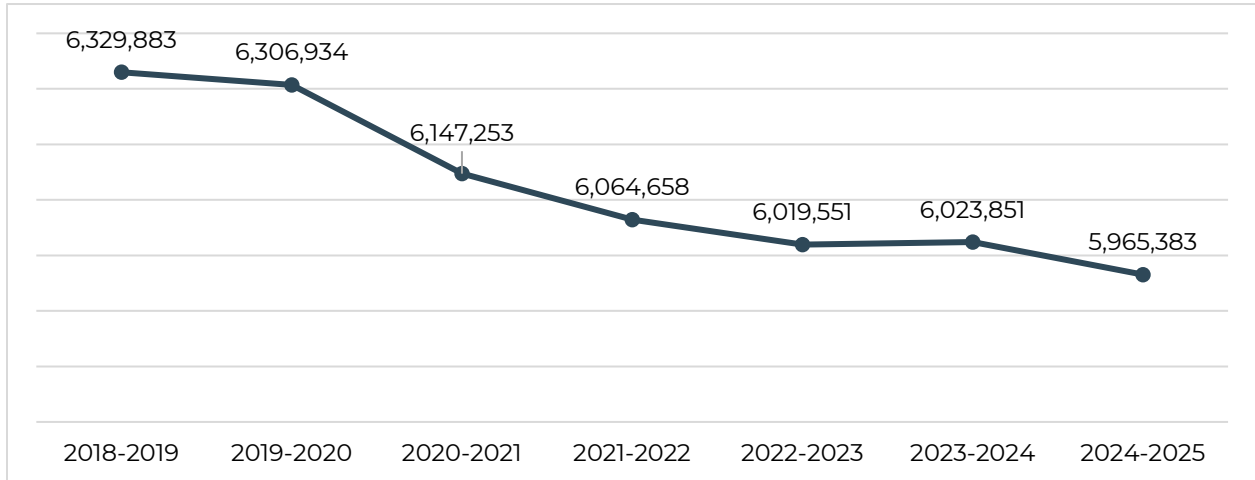
Exhibit 12 displays total K-12 enrollment in the subregion from the 2018-2019 academic year to the 2024-2025 academic year. Until the 2019-20 academic year, K-12 enrollment had been steadily increasing. During the COVID-19 pandemic, enrollment dropped the most between the 2019-20 and 2020-21 academic years, by 10,331 students. Since the 2020-21 academic year, enrollments have increased by 2.0%, adding more than 7,000 students to the subregion. Enrollments have yet to recover to 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%.

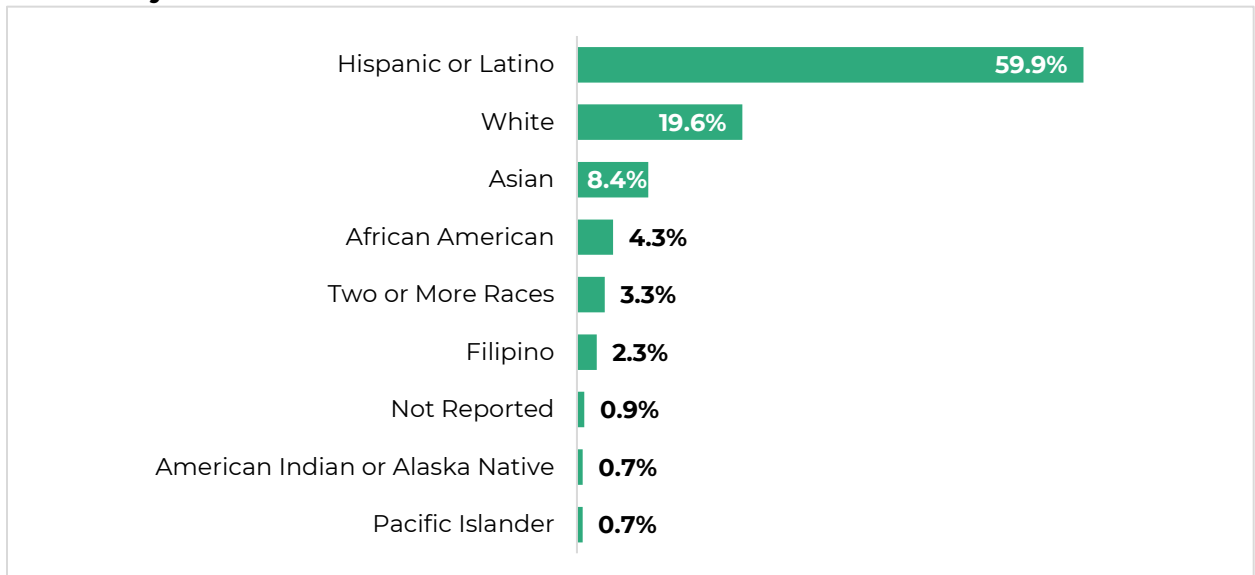
Exhibit 13. Total enrollment for grades K-12 in California, academic years 2018-2019 to 2024-2025



High School Graduation Demographics

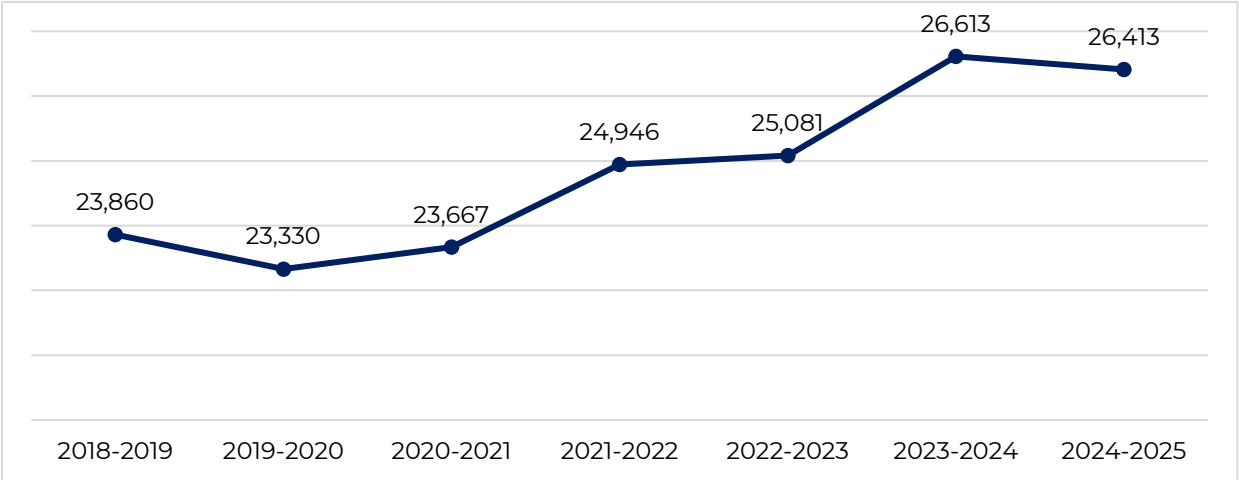
Students who identify as Hispanic or Latino comprise the largest share of high school graduates in the subregion, totaling over 15,800 in the 2024-2025 academic year. The second-largest group is White students, with approximately 5,200, followed by Asian American students, over 2,200. Students who identify 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-N subregion, 2024-2025 academic year



The graduation trend in the subregion has increased steadily since the 2018-2019 academic year. Since 2018-2019, the number of students graduating from high school has increased by 10.7%, or nearly 2,600 students.

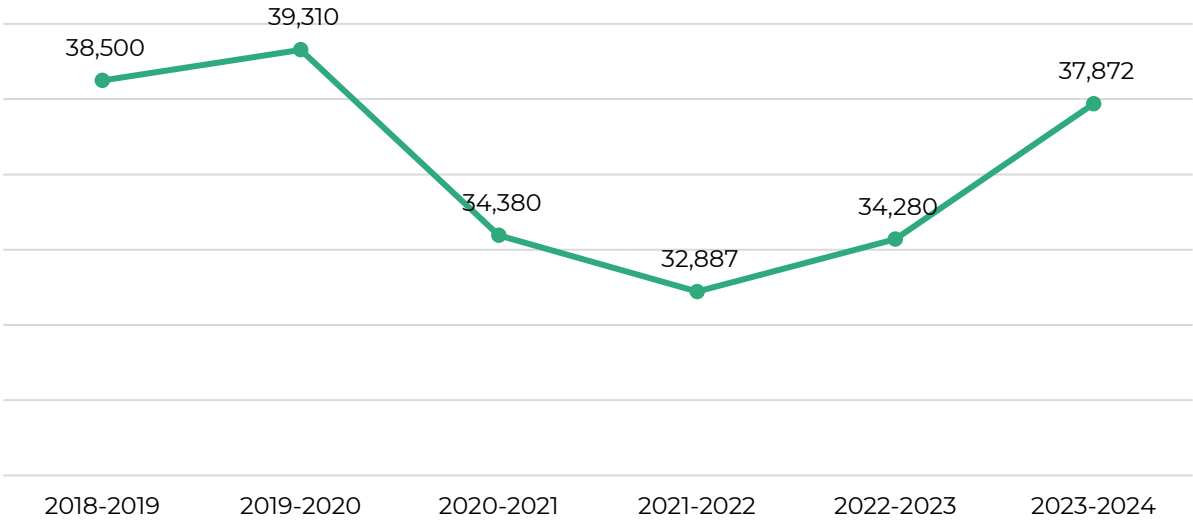
Exhibit 15. High school graduation trend in the subregion, academic years 2018-2019 to 2024-2025



CE Enrollment and Demographics

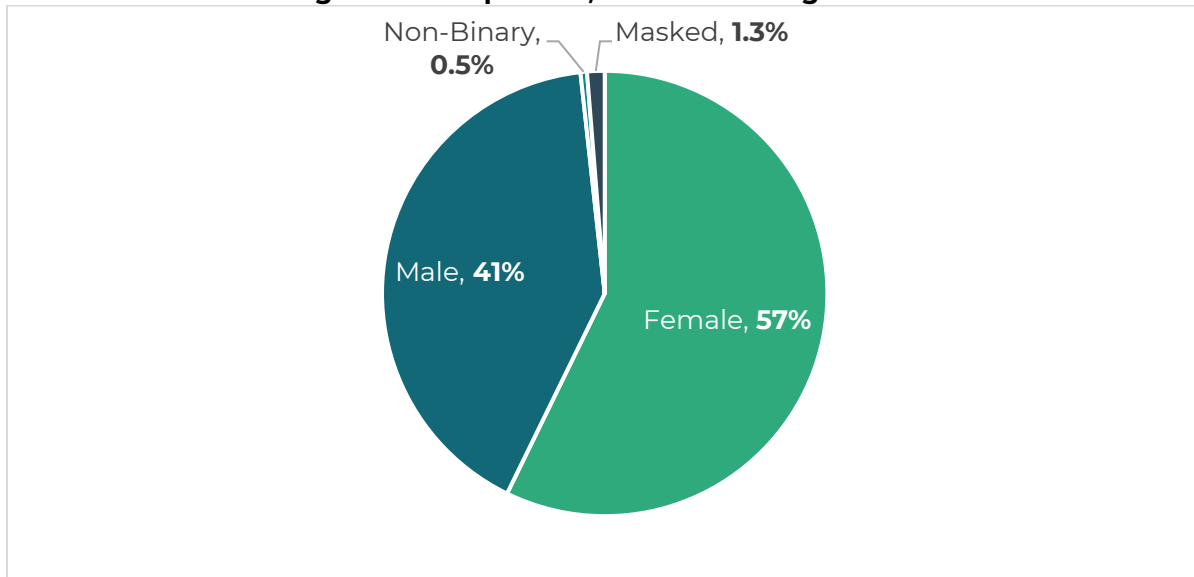
Exhibit 16 displays the number of community college career education (CE) enrollments from the 2018-2019 academic year to the 2023-2024 academic year. Between 2018-2019 and 2021-2022, enrollments steadily declined. Over this period, enrollments declined by more than 5,600 students, or nearly 15%. Since 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-N subregion



Female students comprise a larger percentage of students enrolled in career education (CE) programs than male students in the subregion (Exhibit 17). Female students account for 57% of CE students, while men account for 41%. Students identifying as non-binary accounted for 0.5% of all CE students, while approximately 1.3% of students' data was masked.

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



More than half, 55% of CE students, identify as Hispanic (Exhibit 18). About 23% identify as White, 7% identify as Asian American, and 5% identify as Black. Approximately 3% of students identify as two or more races.

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

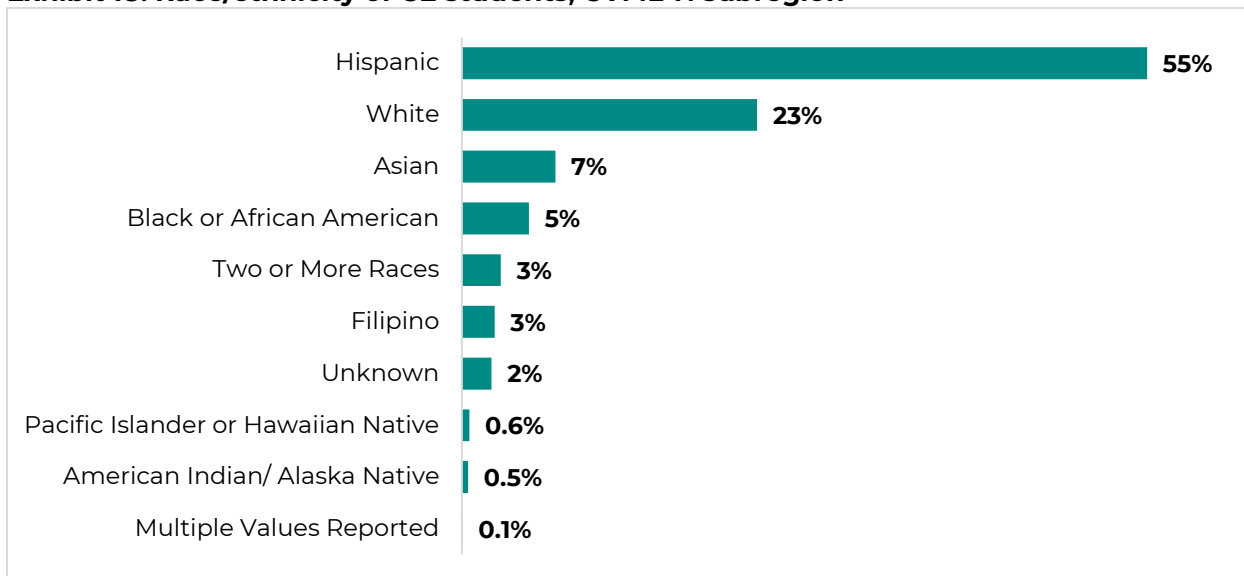
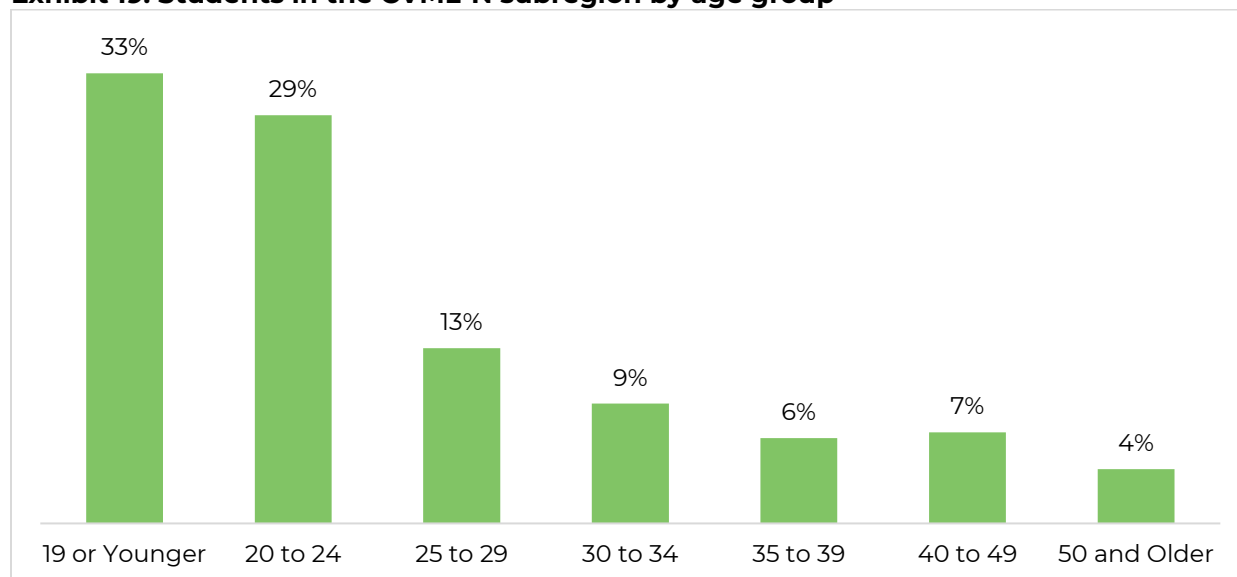


Exhibit 19 displays the share of CVML-N community college career education students by age group. More than half of the students are 24 or younger, accounting for approximately 62% of enrollments.

Exhibit 19. Students in the CVML-N subregion by age group



In the 2023-24 academic year, career education programs with the largest enrollment counts in the CVML-N subregion were business and entrepreneurship, health, ICT/digital media, and education and human development (Exhibit 20).

Exhibit 20. Share of CE enrollments by sector in the CVML-N subregion, 2024-24 academic year

Sector	Percent
Business & Entrepreneurship	18%
Health	18%
ICT/Digital Media	15%
Education & Human Development	14%
Public Safety	9%
Agriculture, Water & Environmental Technologies	8%
Retail, Hospitality & Tourism	6%
Advanced Manufacturing	4%
Unassigned	3%
Energy, Construction & Utilities	3%
Advanced Transportation & Logistics	3%
TOTAL	100%

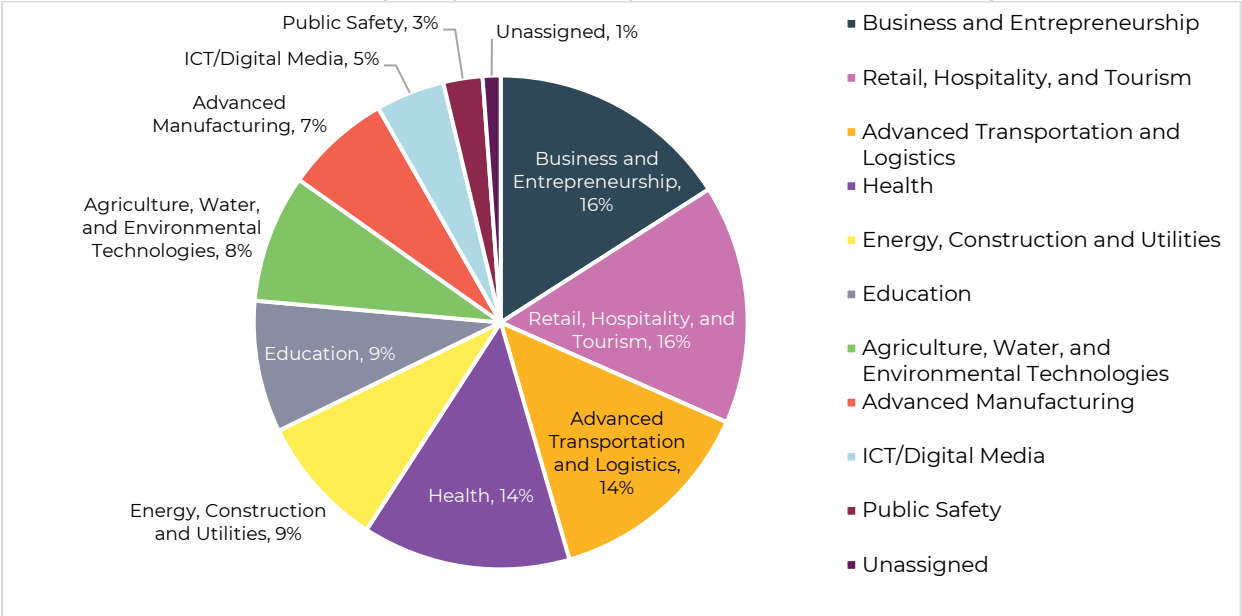
Sector Composition

Across all occupational sectors, there were more than 693,000 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 nearly 110,500 in the CVML-N subregion. This was followed by the retail, hospitality, and tourism and advanced transportation and logistics sectors, which had approximately 108,700 and 96,300 jobs, respectively (Exhibit 21). Subregional employment is concentrated in the top five occupational sectors, accounting for approximately 68% of subregional jobs (Exhibit 22).

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

Sector	2024 Jobs
Business and Entrepreneurship	110,470
Retail, Hospitality, and Tourism	108,651
Advanced Transportation and Logistics	96,263
Health	94,491
Energy, Construction, and Utilities	59,849
Education	59,820
Agriculture, Water, and Environmental Technologies	58,161
Advanced Manufacturing	48,092
ICT/Digital Media	31,291
Public Safety	17,805
Unassigned	8,143
TOTAL	693,037

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

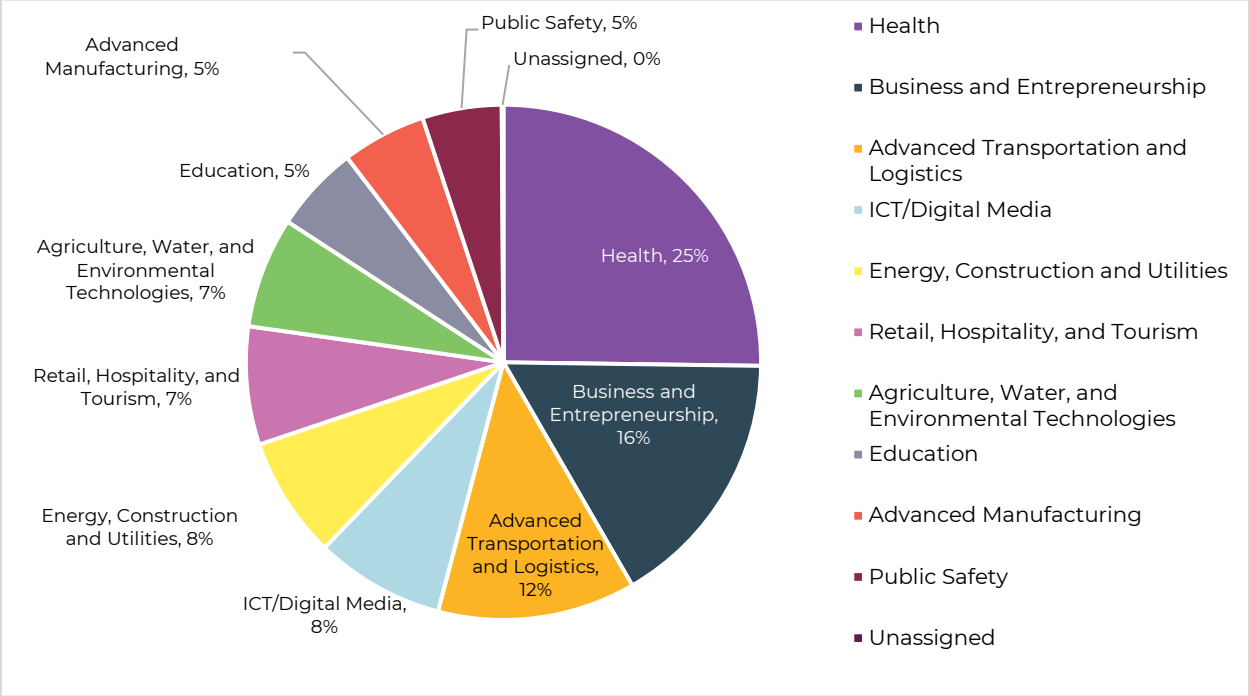


Middle-Skill Jobs Composition

Of the more than 693,000 jobs in the subregion, over 289,100 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 (72,911 jobs), business and entrepreneurship (47,557 jobs), and advanced transportation and logistics (35,949 jobs). These sectors lead all others in annual job openings. Sectors with the fewest total jobs are public safety (14,401 jobs), advanced manufacturing (15,286 jobs), and education (15,698 jobs). 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-N subregion middle-skill employment



Gap Analysis Summary

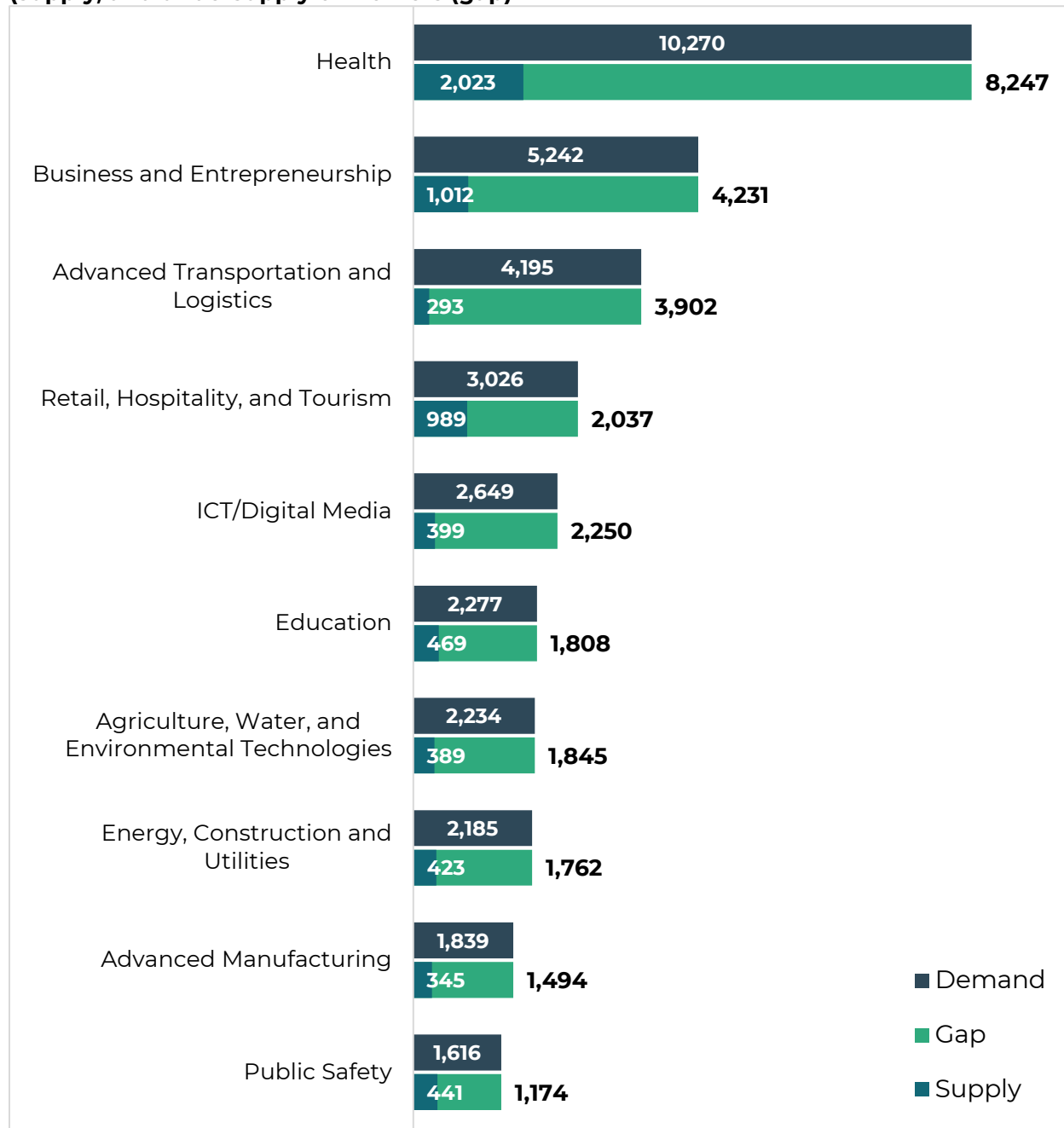
Over 35,500 annual openings are projected for the 10 occupational sectors displayed below. Overall, there is a supply gap of nearly 28,750 workers in the CVML-N subregion. The sectors with the largest supply gaps are health (a shortage of 8,247 workers), business and entrepreneurship (4,231 workers), and advanced transportation and logistics (3,902 workers) (Exhibit 24). The sectors with the smallest gaps are energy, construction, and utilities, public safety, and advanced manufacturing, which are also the sectors with the fewest annual job openings. 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-N subregion

Occupational Sector	Demand (Annual Job Openings)	Gap	Supply (Average Annual Awards)
Health	10,270	8,247	2,023
Business and Entrepreneurship	5,242	4,231	1,012
Advanced Transportation and Logistics	4,195	3,902	293
Retail, Hospitality, and Tourism	3,026	2,037	989
ICT/Digital Media	2,649	2,250	399
Education	2,277	1,808	469
Agriculture, Water, and Environmental Technologies	2,234	1,845	389
Energy, Construction, and Utilities	2,185	1,762	423
Advanced Manufacturing	1,839	1,494	345
Public Safety	1,616	1,174	441
Total	35,533	28,750	6,783



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



Advanced Manufacturing

Summary

- There were nearly 15,300 middle-skill advanced manufacturing jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 1,300 jobs through 2029, representing an 8% increase. More than 1,800 annual job openings are projected for advanced manufacturing workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$22.33 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- Nearly 1,300 job ads were posted in the CVML-N subregion for the top advanced manufacturing occupations profiled in this report. The top job titles were production supervisors, quality control technicians, and safety coordinators.
- Specialized skills: The top skill is food safety and sanitation, and the top certification is a valid driver’s license (CDL Class C).

Advanced Manufacturing Demographics

Comprising 22% of the middle-skill advanced manufacturing workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 53%. The advanced manufacturing workforce contains more Hispanic or Latino workers than the overall middle-skill workforce. Advanced manufacturing workers have a similar age distribution to the rest of the middle-skill workforce.

Exhibit 26. Gender composition of the advanced manufacturing workforce

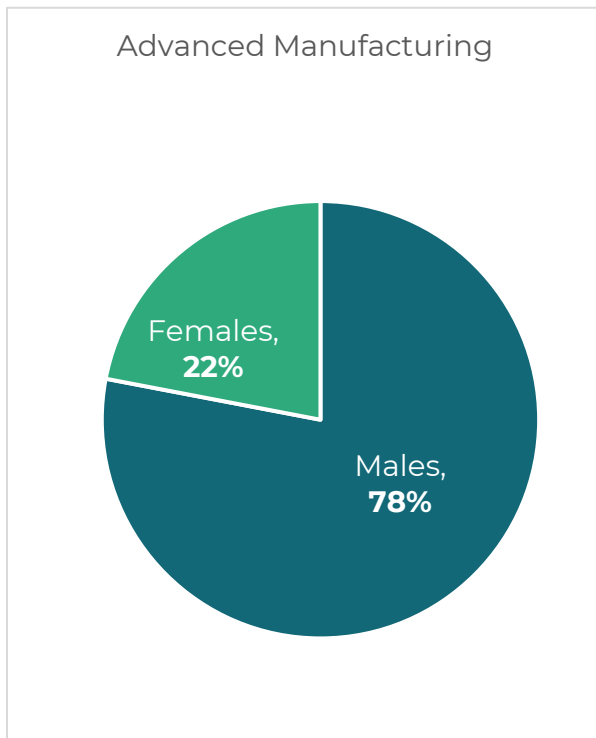


Exhibit 27. Race/ethnicity composition of the advanced manufacturing workforce

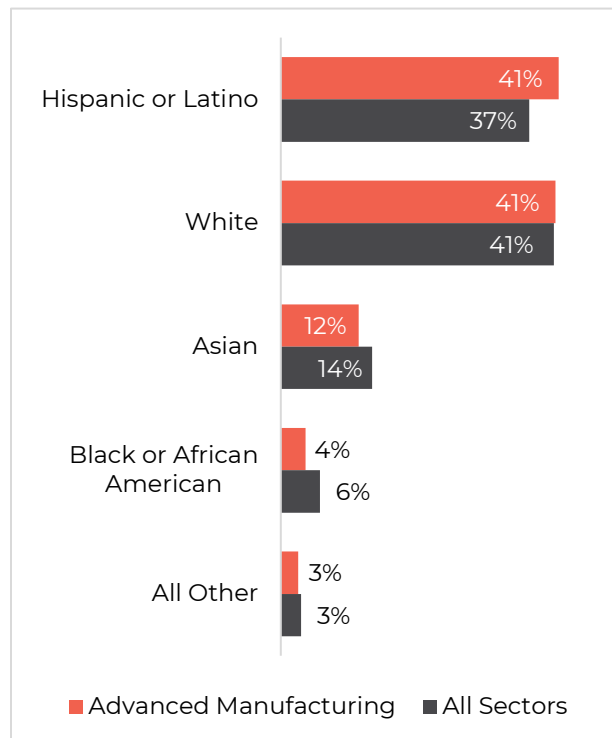
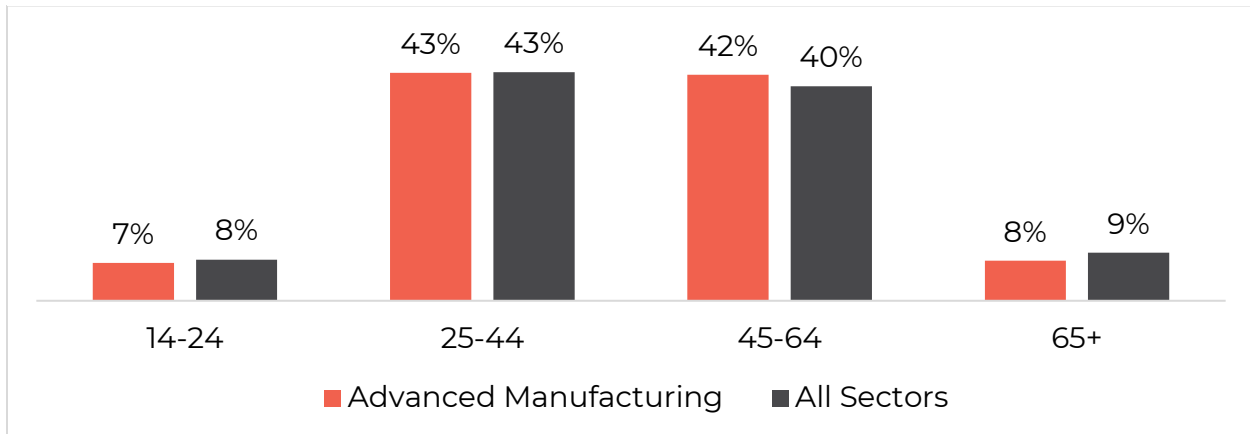


Exhibit 28. Advanced manufacturing workforce composition by age cohorts



Advanced Manufacturing Demand

Exhibit 29 displays advanced manufacturing employment and occupational projections. There were nearly 15,300 middle-skill advanced manufacturing jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 1,300 jobs through 2029, representing an 8% increase. More than 1,800 annual job openings are projected for 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Inspectors, Testers, Sorters, Samplers, and Weighers	2,431	2,582	151	6%	317
First-Line Supervisors of Production and Operating Workers	2,585	2,826	241	9%	300
Industrial Machinery Mechanics	2,082	2,350	268	13%	224
Welders, Cutters, Solderers, and Brazers	1,555	1,641	85	5%	177
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	593	770	177	30%	107
Machinists	500	548	48	10%	62
Molders, Shapers, and Casters, Except Metal and Plastic	337	353	16	5%	47
Computer Numerically Controlled Tool Operators	420	430	11	3%	44
Occupational Health and Safety Technicians	300	348	49	16%	41
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	331	357	26	8%	40
Printing Press Operators	372	336	(36)	(10%)	39

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	297	301	4	1%	35
Maintenance Workers, Machinery	266	305	40	15%	33
Chemical Technicians	207	227	20	10%	29
Sawing Machine Setters, Operators, and Tenders, Wood	206	209	3	2%	25
Top Advanced Manufacturing Occupations	12,481	13,584	1,103	9%	1,519
<i>All Other Advanced Manufacturing Occupations</i>	<i>2,805</i>	<i>2,968</i>	<i>162</i>	<i>6%</i>	<i>320</i>
Total	15,286	16,551	1,265	8%	1,839

Advanced Manufacturing Hourly Earnings

Exhibit 30 displays the hourly earnings for the top middle-skill advanced manufacturing occupations in the CVML-N subregion. Industrial machinery mechanics have the highest entry-level hourly earnings in the advanced manufacturing occupational group at \$29.91 per hour.

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

Occupation	Hourly Earnings		
	25th Percentile	Median	75th Percentile
Industrial Machinery Mechanics	\$29.91	\$37.01	\$41.62
First-Line Supervisors of Production and Operating Workers	\$28.28	\$36.10	\$46.18
Occupational Health and Safety Technicians	\$27.51	\$27.96	\$30.96
Maintenance Workers, Machinery	\$24.67	\$30.07	\$36.48
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	\$23.20	\$23.83	\$29.06
Welders, Cutters, Solderers, and Brazers	\$21.94	\$24.22	\$29.58
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$20.88	\$23.08	\$24.42
Chemical Technicians	\$20.47	\$25.25	\$28.43
Computer Numerically Controlled Tool Operators	\$20.03	\$23.93	\$28.97
Machinists	\$18.80	\$23.39	\$30.01
Inspectors, Testers, Sorters, Samplers, and Weighers	\$18.63	\$23.03	\$28.62
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	\$18.31	\$19.26	\$22.40
Printing Press Operators	\$18.25	\$22.74	\$28.05
Molders, Shapers, and Casters, Except Metal and Plastic	\$17.63	\$22.23	\$25.87

Occupation	Hourly Earnings		
	25th Percentile	Median	75th Percentile
Sawing Machine Setters, Operators, and Tenders, Wood	\$17.21	\$18.23	\$22.48

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 \$22.33 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top manufacturing occupations was \$28.43 per hour over the last 12 months.

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

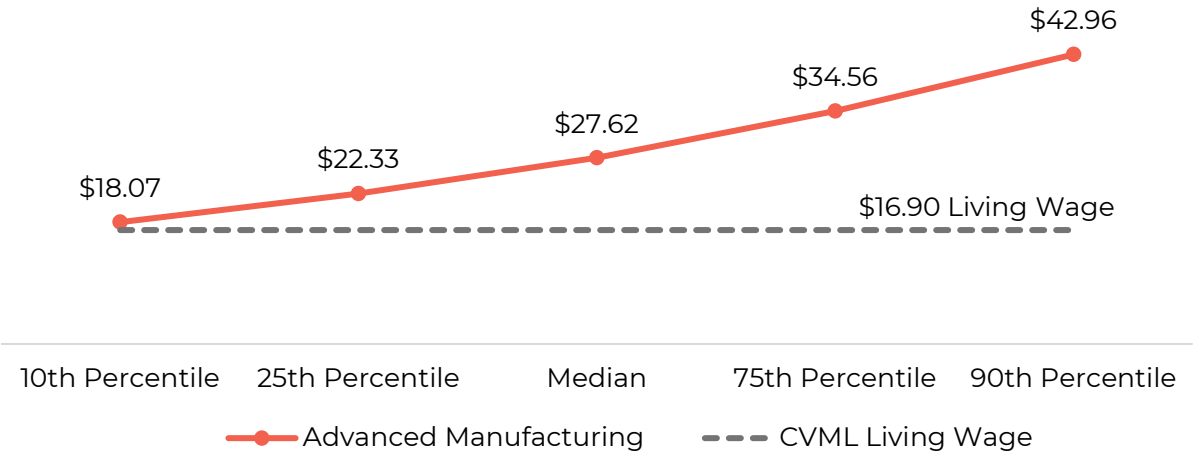


Exhibit 32 displays the certifications, specialized skills, and soft skills included in employer job ads for advanced manufacturing workers. Over the last 12 months, from February 2025 to January 2026, nearly 1,300 job advertisements were posted for the top advanced manufacturing occupations detailed in this report. Three-quarters of subregional advertisements for advanced manufacturing workers in the CVML-N subregion were posted for inspectors, testers, sorters, samplers, and weighers, first-line supervisors of production and operating workers, and occupational health and safety technicians.

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 (CDL Class C)	Food Safety And Sanitation	Communication
Cardiopulmonary Resuscitation (CPR) Certification	Auditing	Management
First Aid Certification	Continuous Improvement Process	Operations
Automated External Defibrillator (AED) Certification	Lifting Ability	Leadership
30-Hour OSHA General Industry Card	Sanitation	Quality Control
Hazard Analysis And Critical Control Point (HACCP) Certification	Good Manufacturing Practices	Quality Assurance

Certifications	Specialized Skills	Soft Skills
10-Hour OSHA General Industry Card	Machinery	Detail Oriented
Certified Safety Professional	Packaging And Labeling	Troubleshooting (Problem Solving)
HAZWOPER Certification	Quality Management	Microsoft Excel
Forklift Certification	Occupational Safety And Health	Customer Service

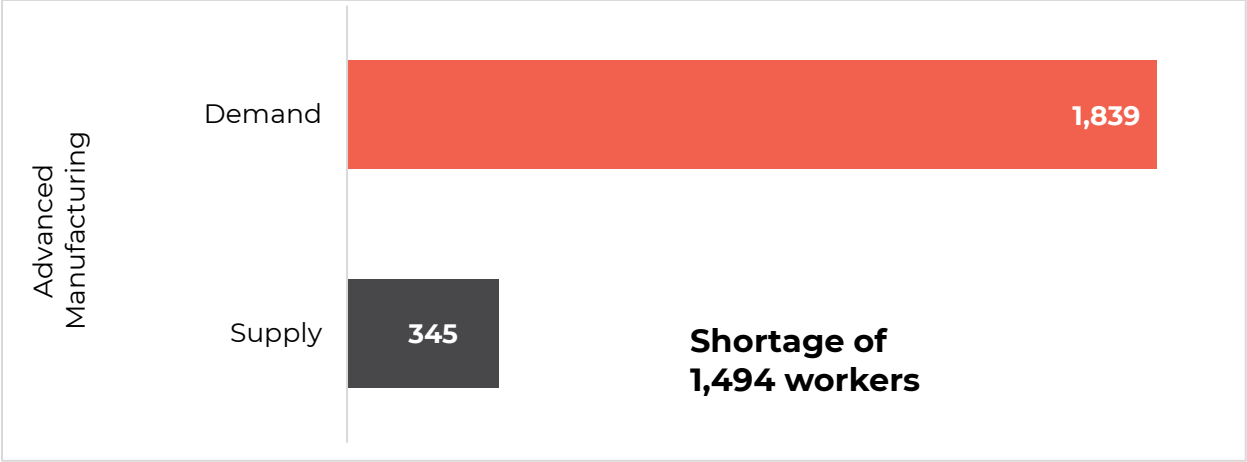
Exhibit 33 displays the community college advanced manufacturing programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 294 awards over the last three academic years from four colleges. Other postsecondary institutions issued 51 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)	2	1
093400 - Electronics and Electric Technology	5	2
093410 - Computer Electronics	11	2
093420 - Industrial Electronics	19	1
094300 - Instrumentation Technology	7	1
094500 - Industrial Systems Technology and Maintenance	3	3
095340 - Mechanical Drafting	13	2
095600 - Manufacturing and Industrial Technology	12	1
095630 - Machining and Machine Tools	16	2
095650 - Welding Technology	205	4
130330 - Fashion Production	1	1
Total	294	-

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 1,494 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 16 advanced manufacturing program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 093480 - Laser and Optical Technology
- 093510 - Appliance Repair
- 093600 - Printing and Lithography
- 094330 - Vacuum Technology
- 095000 - Aeronautical and Aviation 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
- 095670 - Industrial and Occupational Safety and Health
- 095680 - Industrial Quality Control
- 095730 - Surveying
- 096100 - Optics
- 192000 - Ocean Technology

Advanced Transportation and Logistics

Summary

- There were more than 35,900 middle-skill advanced transportation and logistics jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 3,100 jobs through 2029, representing a 9% increase. There are nearly 4,200 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 \$27.98 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were nearly 14,200 job ads posted in the CVML-N subregion for the top advanced transportation and logistics occupations profiled in this report. The top job titles were CDL-A truck drivers, maintenance supervisors, local/regional truck drivers, and warehouse supervisors.
- Specialized skills: The top skill is truck driving, and the top certification is a Valid Driver's License (CDL Class A, B, & C).

Advanced Transportation and Logistics Demographics

Comprising 11% 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 53%. 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, although slightly older.

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

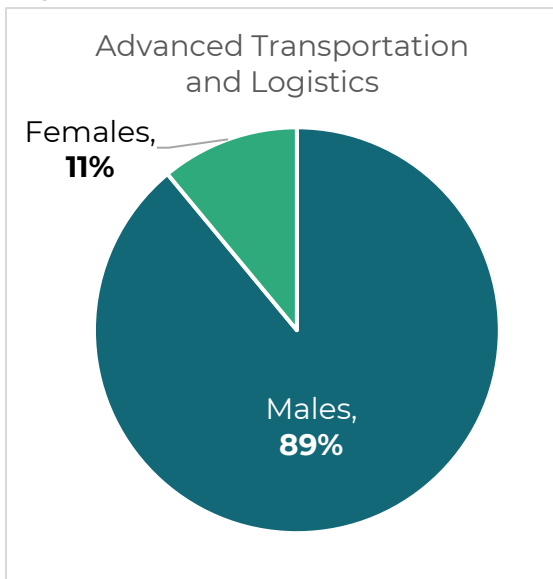


Exhibit 36. Race/ethnicity composition of the advanced transportation and logistics workforce

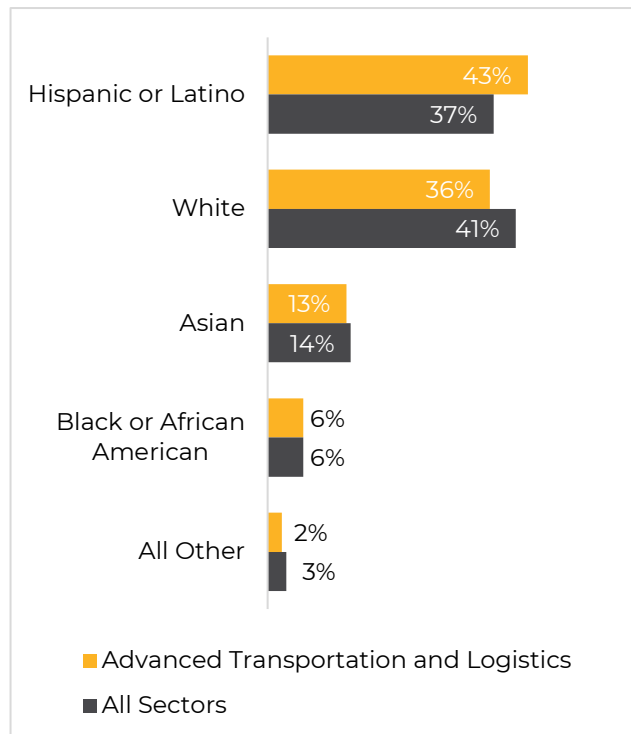
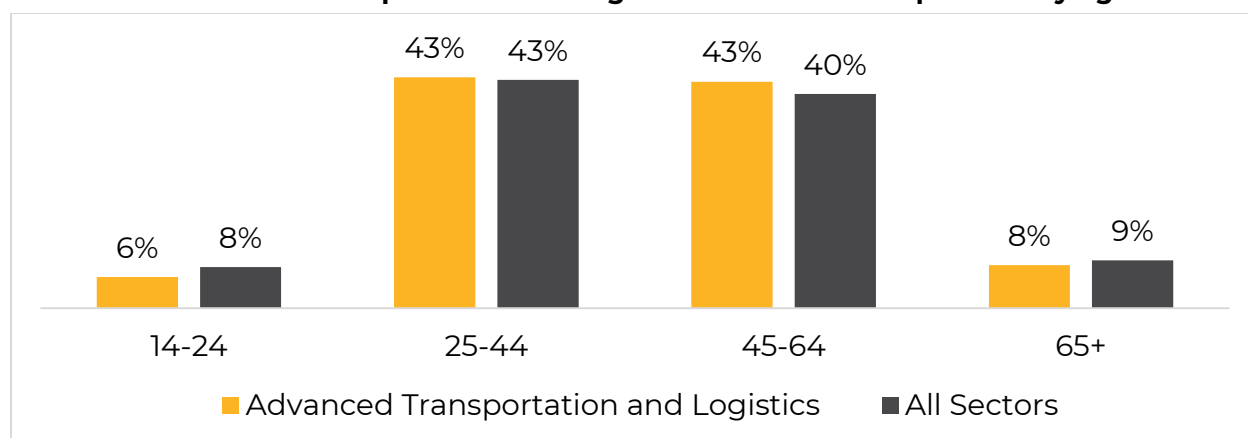


Exhibit 37. Advanced transportation and logistics workforce composition by age cohorts



Advanced Transportation and Logistics Demand

Exhibit 38 displays advanced transportation and logistics employment and occupational projections. There were more than 35,900 middle-skill advanced transportation and logistics jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 3,100 jobs through 2029, growing by 9%. There are nearly 4,200 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Heavy and Tractor-Trailer Truck Drivers	18,989	20,622	1,633	9%	2,350
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	3,754	4,159	405	11%	469
Automotive Service Technicians and Mechanics	3,608	3,804	196	5%	345
First-Line Supervisors of Mechanics, Installers, and Repairers	2,189	2,343	154	7%	210
Transportation, Storage, and Distribution Managers	1,477	1,650	173	12%	160
Bus and Truck Mechanics and Diesel Engine Specialists	1,473	1,588	114	8%	147
Logisticians	669	792	123	18%	85
Automotive Body and Related Repairers	677	735	58	9%	70
Bus Drivers, Transit and Intercity	451	498	47	10%	66
Cargo and Freight Agents	320	379	59	19%	44
Aircraft Mechanics and Service Technicians	372	399	26	7%	34
Commercial Pilots	193	205	12	6%	25

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Recreational Vehicle Service Technicians	164	175	11	7%	24
Outdoor Power Equipment and Other Small Engine Mechanics	194	201	7	4%	22
Railroad Conductors and Yardmasters	200	209	9	5%	20
Top Jobs Total	34,731	37,759	3,028	9%	4,069
<i>All other</i>	<i>1,218</i>	<i>1,258</i>	<i>40</i>	<i>3%</i>	<i>125</i>
Total	35,949	39,016	3,068	9%	4,195

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-N subregion. Transportation, storage, and distribution managers have the highest entry-level hourly earnings in the advanced transportation and logistics occupational group at \$37.38 per hour.

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

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Transportation, Storage, and Distribution Managers	\$37.38	\$46.29	\$61.47
First-Line Supervisors of Mechanics, Installers, and Repairers	\$33.85	\$42.05	\$52.04
Aircraft Mechanics and Service Technicians	\$32.69	\$41.91	\$50.47
Commercial Pilots	\$32.45	\$43.75	\$71.50
Railroad Conductors and Yardmasters	\$32.25	\$32.66	\$36.41
Logisticians	\$30.66	\$39.08	\$49.55
Bus Drivers, Transit and Intercity	\$28.24	\$35.27	\$39.18
Recreational Vehicle Service Technicians	\$24.94	\$31.52	\$35.25
Bus and Truck Mechanics and Diesel Engine Specialists	\$24.53	\$32.12	\$38.14
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	\$24.20	\$31.72	\$36.92
Cargo and Freight Agents	\$23.06	\$25.96	\$28.16
Automotive Body and Related Repairers	\$22.37	\$29.56	\$35.35
Heavy and Tractor-Trailer Truck Drivers	\$21.73	\$27.61	\$33.07
Outdoor Power Equipment and Other Small Engine Mechanics	\$20.95	\$24.65	\$30.66
Automotive Service Technicians and Mechanics	\$19.31	\$26.82	\$33.17

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 \$27.98 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top advanced transportation and logistics occupations was \$32.62 per hour over the last 12 months.

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

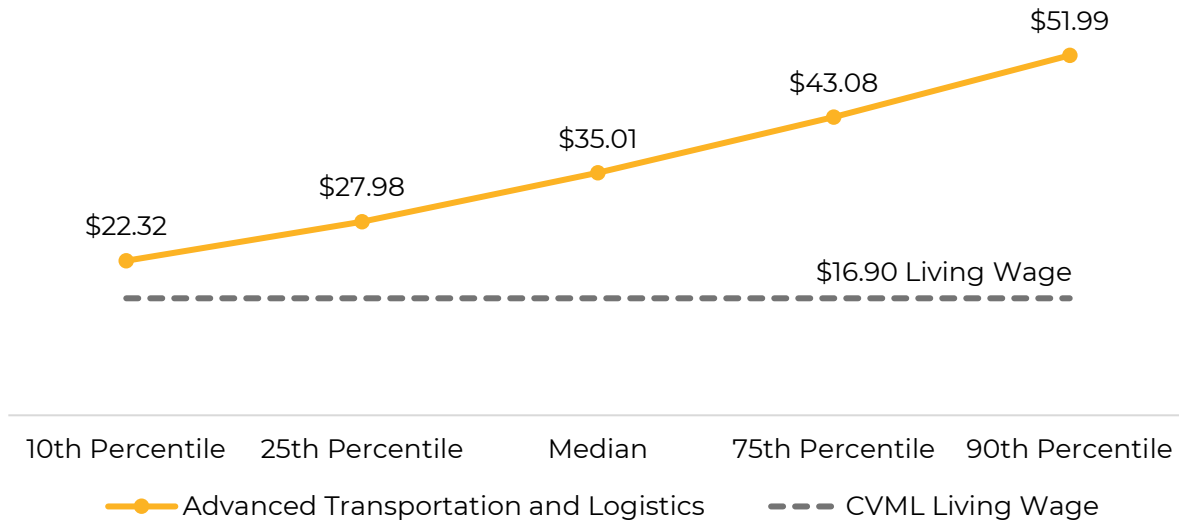


Exhibit 41 displays the certifications, specialized skills, and soft skills included in employer job ads for advanced transportation and logistics workers. Over the last 12 months, from February 2025 to January 2026, there were over 6,300 job advertisements posted for the top advanced transportation and logistics occupations detailed in this report. Nearly half of job advertisements for the advanced transportation and logistics sector were posted for heavy and tractor-trailer truck drivers, indicating that certification and skills information may be skewed towards 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	Warehousing	Customer Service
Hazmat Endorsement	Good Driving Record	Operations
Tanker Endorsement	Lifting Ability	Management
Cardiopulmonary Resuscitation (CPR) Certification	Loading And Unloading	Leadership
First Aid Certification	Forklift Truck	Problem Solving
Forklift Certification	Inventory Management	Detail Oriented
Passenger Endorsement	Continuous Improvement Process	Planning
Tanker And Hazmat Combo X Endorsement	Supply Chain	Sales

Certifications	Specialized Skills	Soft Skills
Transportation Worker Identification Credential (TWIC) Card	Pre-Trip And Post-Trip Vehicle Inspections	Computer Literacy

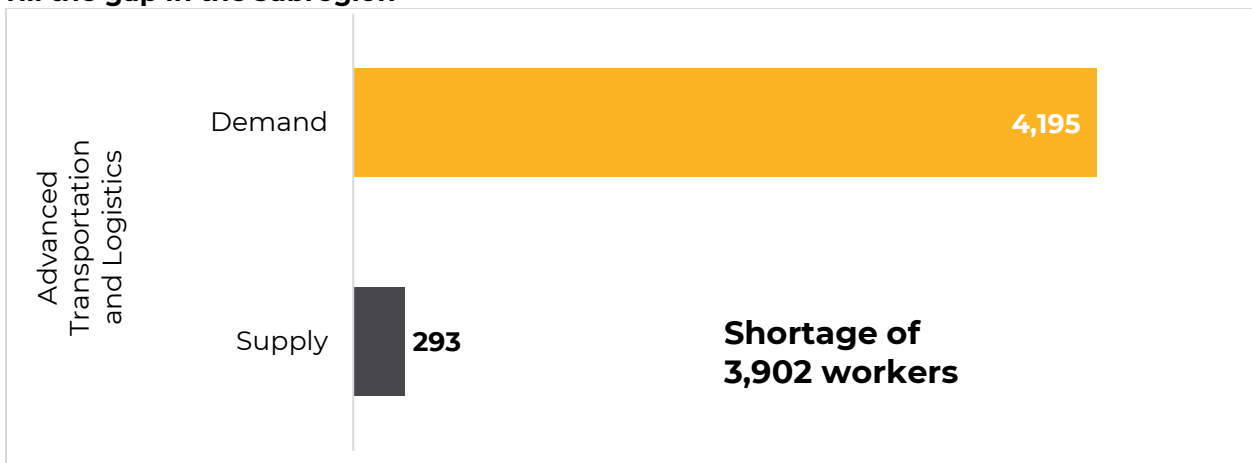
Exhibit 42 displays the community college advanced transportation and logistics programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 293 awards over the last three academic years from four colleges. Other postsecondary institutions have not issued awards in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 293 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
092400 - Engineering Technology, General (requires Trigonometry)	2	1
093400 - Electronics and Electric Technology	5	2
093410 - Computer Electronics	11	2
093420 - Industrial Electronics	19	1
094300 - Instrumentation Technology	7	1
Total	293	-

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 3,902 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 14 advanced transportation and logistics program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 094730 - Heavy Equipment Operation
- 094740 - Railroad and Light Rail Operations
- 094750 - Truck and Bus Driving
- 094830 - Motorcycle, Outboard and Small Engine Repair
- 094840 - Alternative Fuels and Advanced Transportation Technology
- 094850 - Recreational Vehicle Service
- 094910 - Upholstery Repair - Automotive
- 095010 - Aviation Airframe Mechanics
- 095020 - Aviation Powerplant Mechanics
- 095900 - Marine Technology
- 302000 - Aviation and Airport Management and Services
- 302010 - Aviation and Airport Management
- 302020 - Piloting
- 302030 - Air Traffic Control



Agriculture, Water & Environmental Technologies

Summary

- There were nearly 20,100 middle-skill agriculture, water, and environmental technologies jobs in the CVML-N subregion in 2024. This occupational group is projected to lose 16 jobs through 2029, a decline of 0.1%. There are more than 2,200 annual job openings projected for workers in the agriculture, water, and environmental technologies sector over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$21.83 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were nearly 1,800 job ads posted in the CVML-N subregion for the top agriculture, water, and environmental technologies occupations profiled in this report. The top job titles were veterinary assistant, veterinary technician, dog trainer, and heavy equipment mechanic.
- Specialized skills: The top skill is marketing, and the top certification is a Valid Driver's License (CDL Class A & C).

Agriculture, Water & Environmental Technologies Demographics

Comprising 31% 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 53%. 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 57% of the workforce 45 years or older.

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

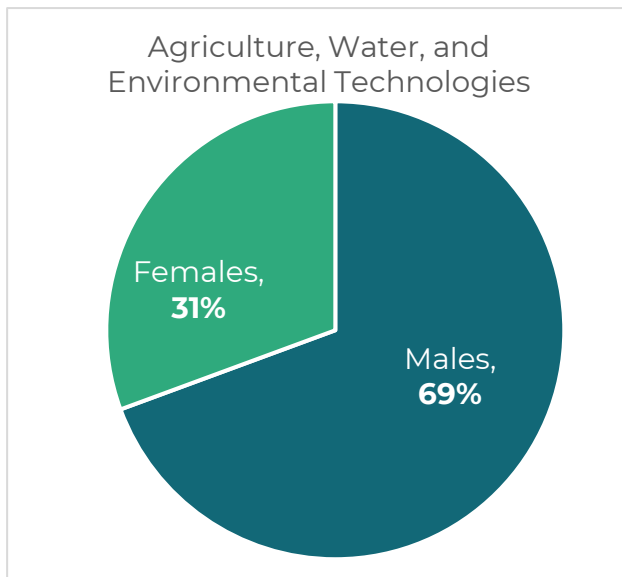


Exhibit 45. Race/ethnicity composition of the agriculture, water, and environmental technologies workforce

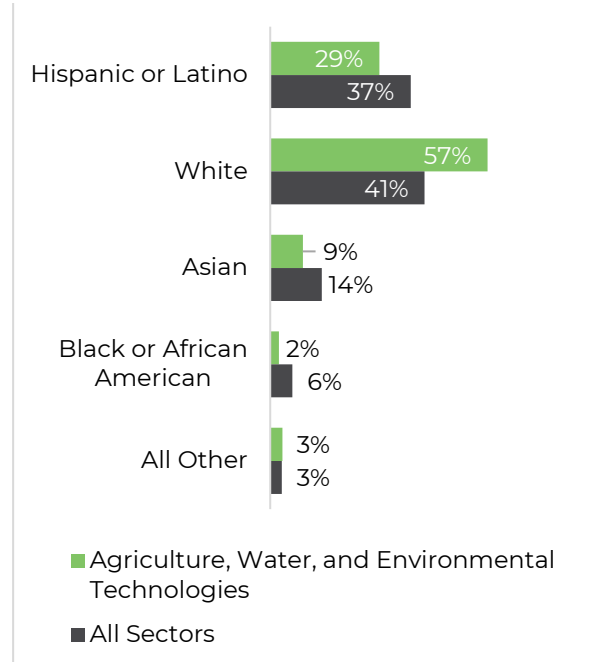
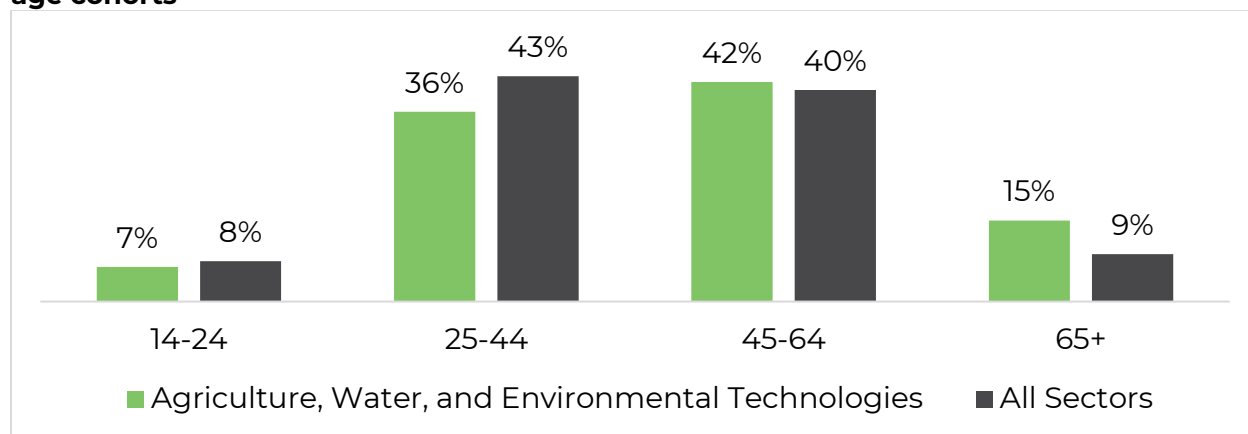


Exhibit 46. Agriculture, water, and environmental technologies workforce composition by age cohorts



Agriculture, Water & Environmental Technologies Demand

Exhibit 47 displays agriculture, water, and environmental technologies employment and occupational projections. There were nearly 20,100 middle-skill agriculture, water, and environmental technologies jobs in the CVML-N subregion in 2024. This occupational group is projected to lose 16 jobs by 2029, a 0.1% decline. There are more than 2,200 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Farmers, Ranchers, and Other Agricultural Managers	6,801	6,304	(497)	(7%)	697
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	4,444	4,635	190	4%	437
First-Line Supervisors of Farming, Fishing, and Forestry Workers	1,480	1,478	(2)	(0%)	206
Buyers and Purchasing Agents	1,320	1,424	103	8%	150
Food Science Technicians	595	619	24	4%	92
Mobile Heavy Equipment Mechanics, Except Engines	965	1,012	47	5%	91
Veterinary Assistants and Laboratory Animal Caretakers	422	458	37	9%	87
Environmental Science and Protection Technicians, Including Health	510	521	11	2%	59
Farm Equipment Mechanics and Service Technicians	630	646	16	2%	58
Veterinary Technologists and Technicians	407	447	40	10%	48

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Animal Trainers	283	272	(11)	(4%)	40
Agricultural Technicians	244	245	1	0%	36
Forest and Conservation Technicians	270	260	(10)	(4%)	33
Forest and Conservation Workers	150	149	(1)	(1%)	32
Floral Designers	206	200	(5)	(3%)	26
Top Jobs Total	18,728	18,669	(58)	(0%)	2,090
<i>All other</i>	1,371	1,413	42	3%	144
Total	20,099	20,082	(16)	(0%)	2,234

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-N subregion. Buyers and purchasing have the highest entry-level hourly earnings in the agriculture, water, and environmental technologies occupational group at \$27.46 per hour.

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

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Buyers and Purchasing Agents	\$27.46	\$34.67	\$44.06
Mobile Heavy Equipment Mechanics, Except Engines	\$25.19	\$33.77	\$38.21
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$24.71	\$35.28	\$48.25
Forest and Conservation Technicians	\$22.51	\$27.07	\$35.63
Veterinary Technologists and Technicians	\$21.83	\$23.66	\$28.13
Food Science Technicians	\$21.52	\$24.07	\$30.19
Farm Equipment Mechanics and Service Technicians	\$21.39	\$26.38	\$34.55
Environmental Science and Protection Technicians, Including Health	\$19.65	\$22.38	\$28.63
Agricultural Technicians	\$19.59	\$23.58	\$28.68
First-Line Supervisors of Farming, Fishing, and Forestry Workers	\$17.85	\$24.27	\$31.95
Veterinary Assistants and Laboratory Animal Caretakers	\$17.78	\$18.65	\$22.34
Forest and Conservation Workers	\$16.90	\$19.79	\$25.07
Floral Designers	\$16.90	\$19.17	\$24.83
Farmers, Ranchers, and Other Agricultural Managers	\$16.90	\$18.64	\$32.80

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Animal Trainers	\$16.90	\$18.83	\$27.09

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 \$21.83 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top agriculture, water, and environmental technologies occupations was \$32.37 per hour over the last 12 months.

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

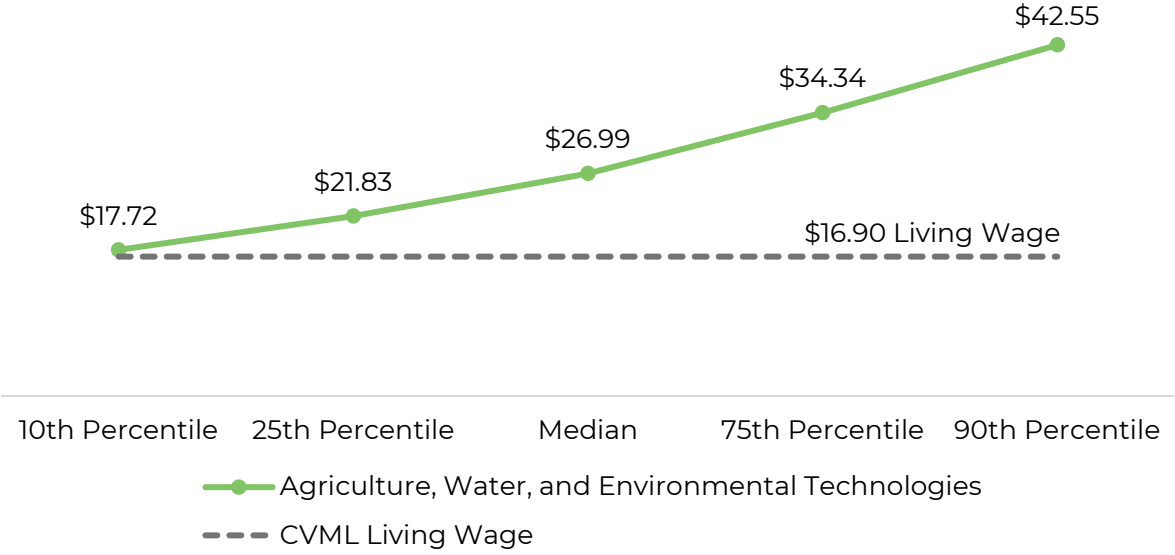


Exhibit 50 displays the certifications, specialized skills, and soft skills included in employer job ads for agriculture, water, and environmental technologies workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 1,800 job advertisements posted for the top agriculture, 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 & C)	Marketing	Communication
Certified Veterinary Technician	Purchasing	Customer Service
Registered Vascular Technologist (RVT)	Lifting Ability	Management
Automotive Service Excellence (ASE) Certification	Good Driving Record	Operations

Certifications	Specialized Skills	Soft Skills
Certified Arborist	Inventory Management	Leadership
Project Management Professional Certification	Heavy Equipment	Detail Oriented
30-Hour OSHA General Industry Card	Project Management	Organizational Skills
Forklift Certification	Agriculture	Interpersonal Communications
DOT Certification	Machinery	Problem Solving
Cardiopulmonary Resuscitation (CPR) Certification	Hydraulics	Microsoft Office

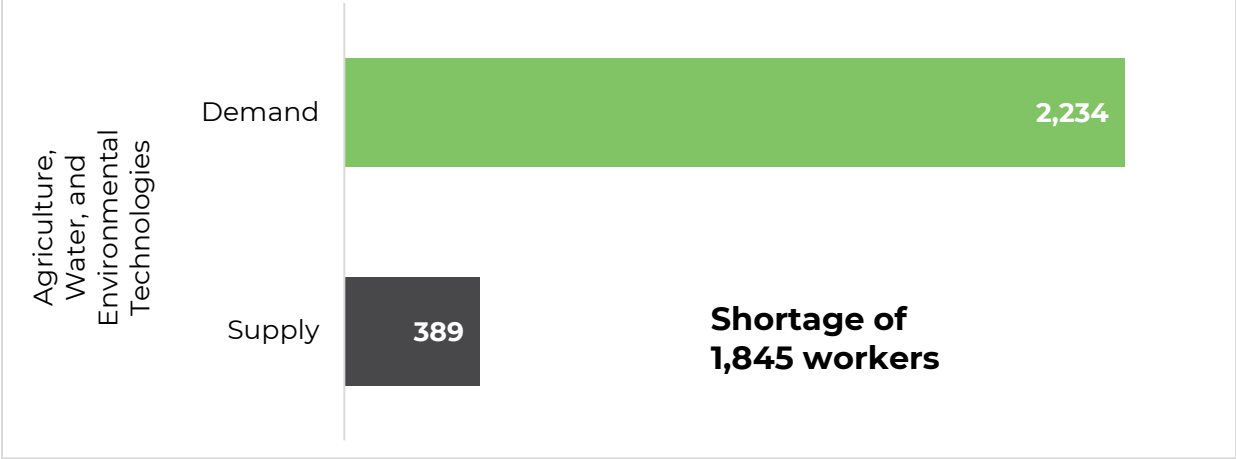
Exhibit 51 displays the community college agriculture, water, and environmental technologies programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 352 awards over the last three academic years from four colleges. Other postsecondary institutions issued 37 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 389 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	25	2
010200 - Animal Science	37	3
010210 - Veterinary Technician (Licensed)	57	1
010220 - Artificial Inseminator (Licensed)	7	1
010230 - Dairy Science	5	1
010240 - Equine Science	5	2
010300 - Plant Science	25	3
010900 - Horticulture	10	3
010910 - Landscape Design and Maintenance	2	1
010920 - Floriculture /Floristry	1	1
010930 - Nursery Technology	1	2
011200 - Agriculture Business, Sales and Service	63	3
011400 - Forestry	13	1
011500 - Natural Resources	15	1
011600 - Agricultural Power Equipment Technology	80	3
019900 - Other Agriculture and Natural Resources	5	1
Total	352	-

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 1,845 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-N subregion over the last three academic years.

- 010310 - Agricultural Pest Control Advisor and Operator
- 010400 - Viticulture, Enology, and Wine Business
- 010940 - Turfgrass Technology
- 011300 - Food Processing and Related Technologies
- 011510 - Parks and Outdoor Recreation
- 011520 - Wildlife and Fisheries
- 30300 - Environmental Technology

Business & Entrepreneurship

Summary

- There were nearly 47,600 middle-skill business and entrepreneurship jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 1,300 jobs through 2029, growing by 3%. There are over 5,200 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 \$22.69 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were over 5,600 job ads posted in the CVML-N 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 is a Valid Driver's License (CDL Class C).

Business & Entrepreneurship Demographics

Comprising 34% 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 47%. 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

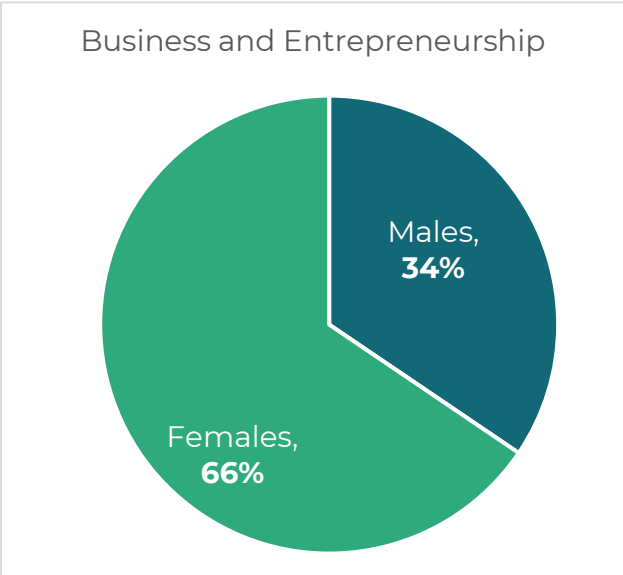


Exhibit 54. Race/ethnicity composition of the business and entrepreneurship workforce

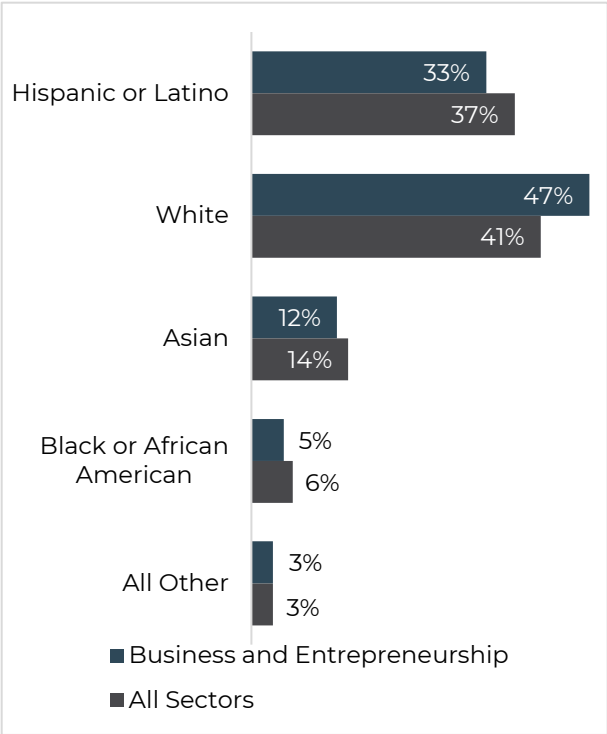
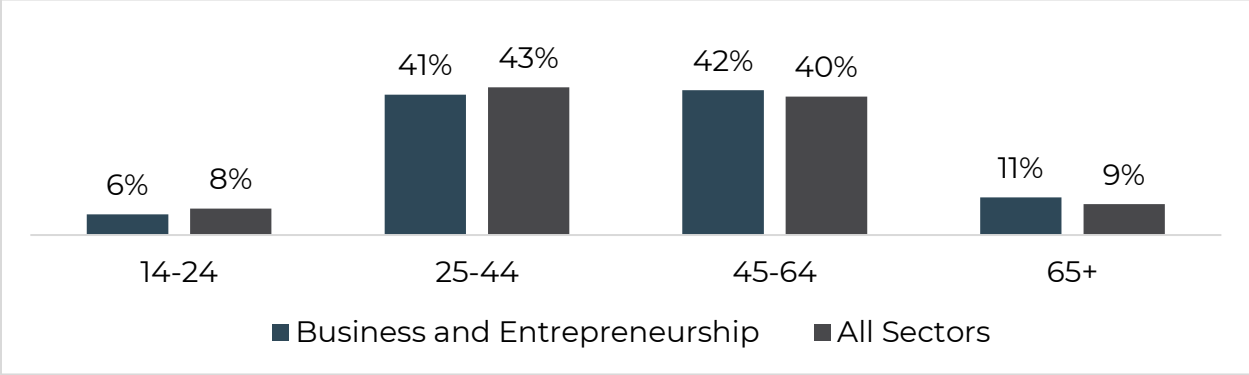


Exhibit 55. Business and entrepreneurship workforce composition by age cohorts



Business & Entrepreneurship Demand

Exhibit 56 displays business and entrepreneurship employment and occupational projections. There were nearly 47,600 middle-skill business and entrepreneurship jobs in the CVML-N subregion in 2024. This occupational group is projected to add more than 1,300 jobs through 2029, representing a 3% increase. There are over 5,200 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
General and Operations Managers	8,855	9,610	754	9%	889
Customer Service Representatives	5,321	5,450	129	2%	745
Bookkeeping, Accounting, and Auditing Clerks	5,732	5,755	23	0%	667
First-Line Supervisors of Office and Administrative Support Workers	5,188	5,284	97	2%	518
Receptionists and Information Clerks	2,755	2,909	154	6%	406
Production, Planning, and Expediting Clerks	1,810	1,956	145	8%	212
Insurance Sales Agents	2,195	2,319	124	6%	201
Real Estate Sales Agents	1,436	1,432	(3)	(0%)	123
Property, Real Estate, and Community Association Managers	1,426	1,414	(13)	(1%)	117
Sales and Related Workers, All Other	840	860	20	2%	113
First-Line Supervisors of Non-Retail Sales Workers	1,041	1,092	52	5%	95
Administrative Services Managers	1,003	1,053	51	5%	92
Payroll and Timekeeping Clerks	881	839	(41)	(5%)	90
Skincare Specialists	504	576	72	14%	89
Tellers	888	686	(201)	(23%)	79

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Top Jobs Total	39,873	41,236	1,363	3%	4,438
<i>All other</i>	7,684	7,641	(43)	(1%)	805
Total	47,557	48,877	1,320	3%	5,242

Business & Entrepreneurship Hourly Earnings

Exhibit 57 displays the hourly earnings for the top middle-skill business and entrepreneurship occupations in the CVML-N subregion. Administrative services managers have the highest entry-level hourly earnings in the business and entrepreneurship occupational group at \$36.88 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	\$36.88	\$48.76	\$66.00
General and Operations Managers	\$34.74	\$49.82	\$75.07
First-Line Supervisors of Office and Administrative Support Workers	\$27.46	\$33.60	\$39.92
Insurance Sales Agents	\$22.98	\$30.33	\$43.43
Payroll and Timekeeping Clerks	\$22.12	\$27.82	\$33.44
Property, Real Estate, and Community Association Managers	\$21.60	\$31.38	\$42.91
Bookkeeping, Accounting, and Auditing Clerks	\$21.32	\$25.50	\$30.29
Production, Planning, and Expediting Clerks	\$21.03	\$26.00	\$32.52
First-Line Supervisors of Non-Retail Sales Workers	\$20.62	\$31.56	\$44.75
Tellers	\$19.84	\$21.22	\$22.13
Real Estate Sales Agents	\$19.07	\$30.67	\$61.32
Sales and Related Workers, All Other	\$18.97	\$23.72	\$34.07
Customer Service Representatives	\$18.75	\$22.12	\$28.20
Receptionists and Information Clerks	\$17.32	\$19.17	\$22.31
Skincare Specialists	\$16.90	\$18.23	\$25.43

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 \$22.69 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top business and entrepreneurship occupations was \$24.49 per hour over the last 12 months.

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

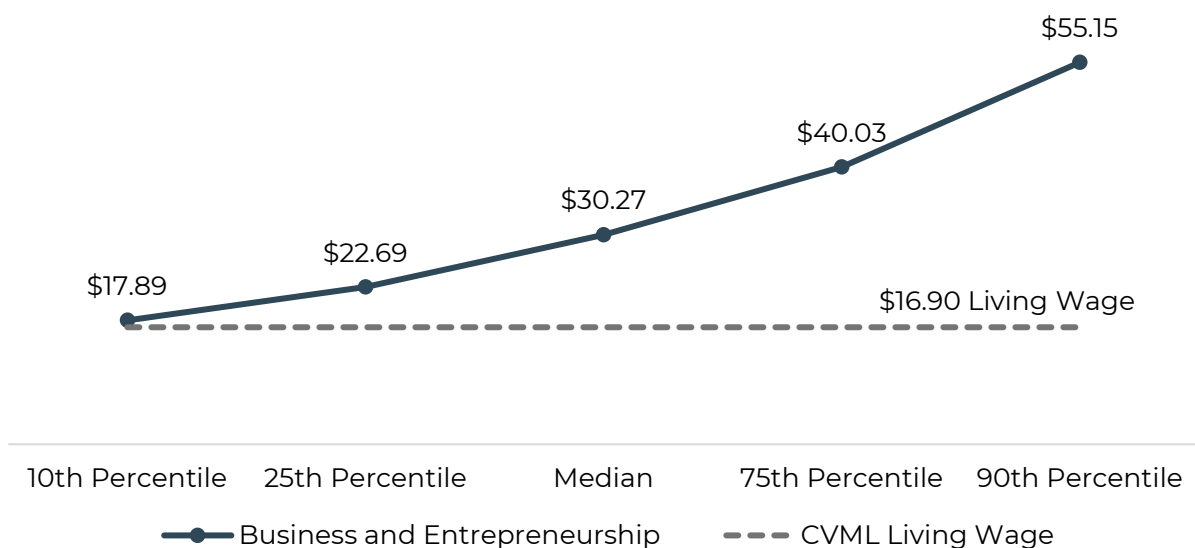


Exhibit 59 displays the certifications, specialized skills, and soft skills included in employer job ads for business and entrepreneurship workers. Over the last 12 months, from February 2025 to January 2026, there were over 5,600 job advertisements posted for the top business and entrepreneurship occupations detailed in this report. Approximately 25% 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 (CDL Class C)	Accounting	Customer Service
Property And Casualty Insurance License	Marketing	Communication
Real Estate Salesperson License	Auditing	Operations
Basic Life Support (BLS) Certification	Data Entry	Sales
Cardiopulmonary Resuscitation (CPR) Certification	Invoicing	Management
First Aid Certification	Merchandising	Detail Oriented
Master Of Business Administration (MBA)	Finance	Leadership
Automated External Defibrillator (AED) Certification	Billing	Problem Solving
Typing Certification	Operations Management	Multitasking
American Red Cross (ARC) Certification	Accounts Payable	Microsoft Office

Exhibit 60 displays the community college business and entrepreneurship programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 982 awards over the last three academic years from four colleges. Other postsecondary institutions issued 30 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion

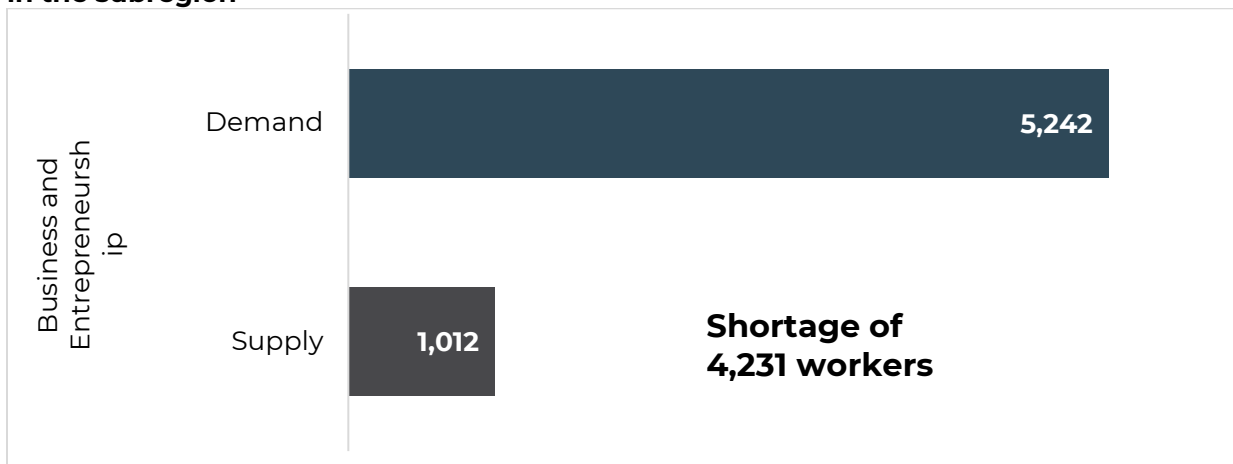
issued 1,012 awards annually in business and entrepreneurship programs. See the appendix to view award data by postsecondary institution.

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	202	3
050200 - Accounting	138	4
050210 - Tax Studies	9	1
050500 - Business Administration	423	4
050600 - Business Management	26	2
050630 - Management Development and Supervision	45	3
050640 - Small Business and Entrepreneurship	24	4
050800 - International Business and Trade	1	1
050900 - Marketing and Distribution	11	3
051100 - Real Estate	103	3
059900 - Other Business and Management	1	1
Total	982	-

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 4,231 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 13 business and entrepreneurship program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 050400 - Banking and Finance
- 050910 - Advertising
- 050920 - Purchasing
- 050940 - Sales and Salesmanship
- 050970 - e-commerce (business emphasis)
- 051110 - Escrow
- 051200 - Insurance
- 051410 - Legal Office Technology
- 051800 - Customer Service
- 125500 - Mortuary Science
- 126200 - Massage Therapy
- 300500 - Custodial Services
- 300700 - Cosmetology and Barbering



Education

Summary

- There were nearly 15,700 middle-skill education jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 600 jobs through 2029, growing by 4%. There are nearly 2,300 annual job openings projected for education workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$20.46 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were over 1,500 job ads posted in the CVML-N 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 9% of the middle-skill education workforce, men are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 47%. 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 12%.

Exhibit 62. Gender composition of the education workforce

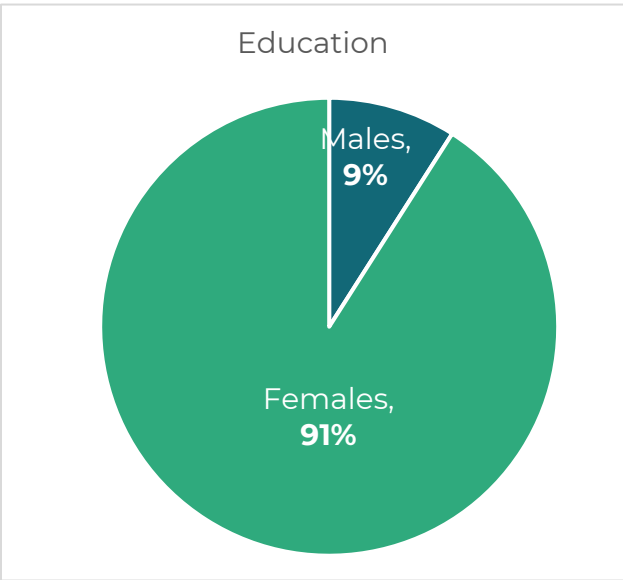


Exhibit 63. Race/ethnicity composition of the education workforce

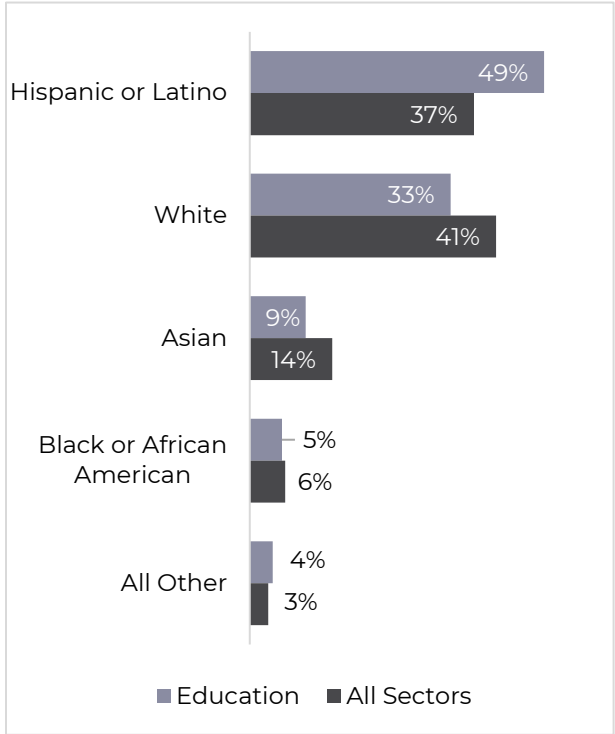
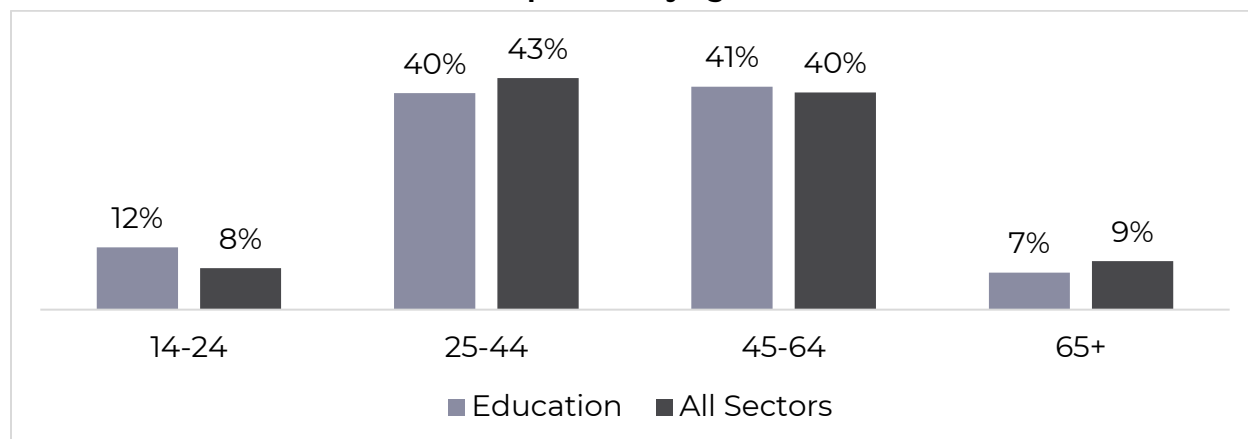


Exhibit 64. Education workforce composition by age cohorts



Education Demand

Exhibit 65 displays employment and occupational projections for the education occupational group. There were nearly 15,700 middle-skill education jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 600 jobs through 2029, growing by 4%. There are nearly 2,300 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Teaching Assistants, Except Postsecondary	7,965	8,643	679	9%	1,107
Childcare Workers	4,116	3,899	(217)	(5%)	703
Preschool Teachers, Except Special Education	2,126	2,194	69	3%	257
Kindergarten Teachers, Except Special Education	609	665	56	9%	81
Library Technicians	366	373	7	2%	65
Teaching Assistants, Postsecondary	301	314	13	4%	40
Interpreters and Translators	216	227	11	5%	23
Top Jobs Total	15,698	16,316	618	4%	2,277
<i>All other</i>	-	-	-	-	-
Total	15,698	16,316	618	4%	2,277

Education Hourly Earnings

Exhibit 66 displays the hourly earnings for the top middle-skill education occupations in the CVML-N subregion. Kindergarten teachers, except special education, have the highest entry-level hourly earnings in the education occupational group at \$31.18 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	\$31.18	\$48.22	\$54.79
Interpreters and Translators	\$22.26	\$28.63	\$40.81
Library Technicians	\$21.02	\$23.26	\$28.78
Preschool Teachers, Except Special Education	\$18.42	\$21.63	\$25.76
Teaching Assistants, Except Postsecondary	\$17.67	\$20.97	\$22.75
Teaching Assistants, Postsecondary	\$16.90	\$18.05	\$26.21
Childcare Workers	\$16.90	\$17.17	\$21.03

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 \$20.46 per hour, which is above the \$16.90 living wage in the CVML-N 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

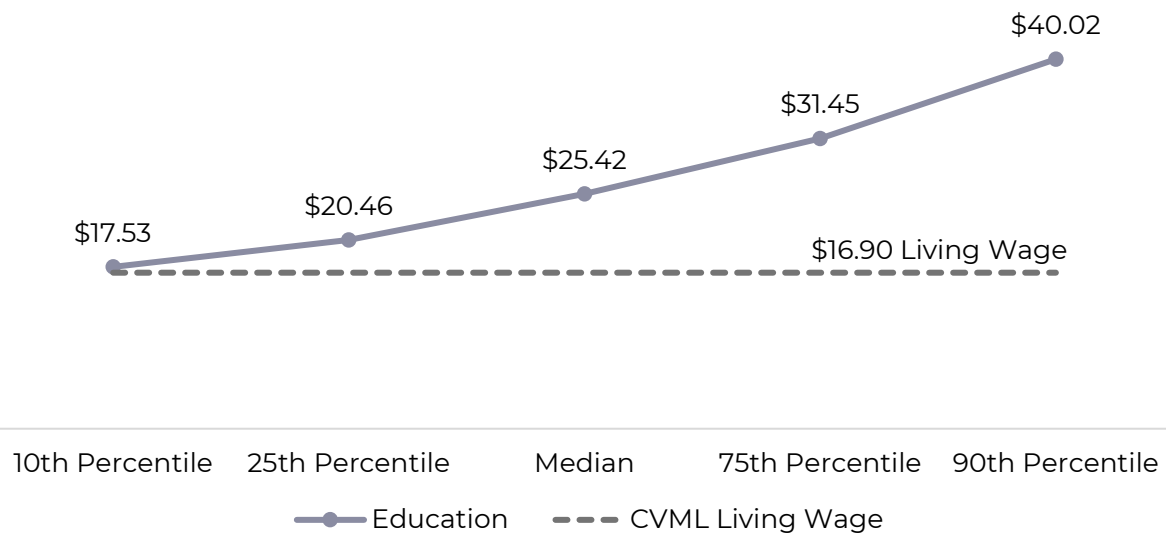


Exhibit 68 displays the certifications, specialized skills, and soft skills included in employer job ads for education workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 1,600 job advertisements posted for the top education occupations detailed in this report. Nearly two-thirds 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
Cardiopulmonary Resuscitation (CPR) Certification	Special Education	Teaching
First Aid Certification	Child Development	Communication
No Child Left Behind Act (NCLB) Standards	Preschool Education	English Language
Valid Driver's License (CDL Class C)	Working With Children	Clerical Works
Board Certified Behavior Analyst (BCBA)	Lesson Planning	Writing
Typing Certification	Early Childhood Education	Multilingualism
English Learner Authorization	Individualized Education Programs (IEP)	Management
Teaching Certificate	Disabilities	Mathematics
Board Certified/Board Eligible	Classroom Management	Planning
Registered Behavior Technician (RBT)	First Aid	Confidentiality

Exhibit 69 displays the community college education programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 463 awards over the last three academic years from four colleges. Other postsecondary institutions issued six awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 469 awards annually in education programs. See the appendix to view award data by postsecondary institution.

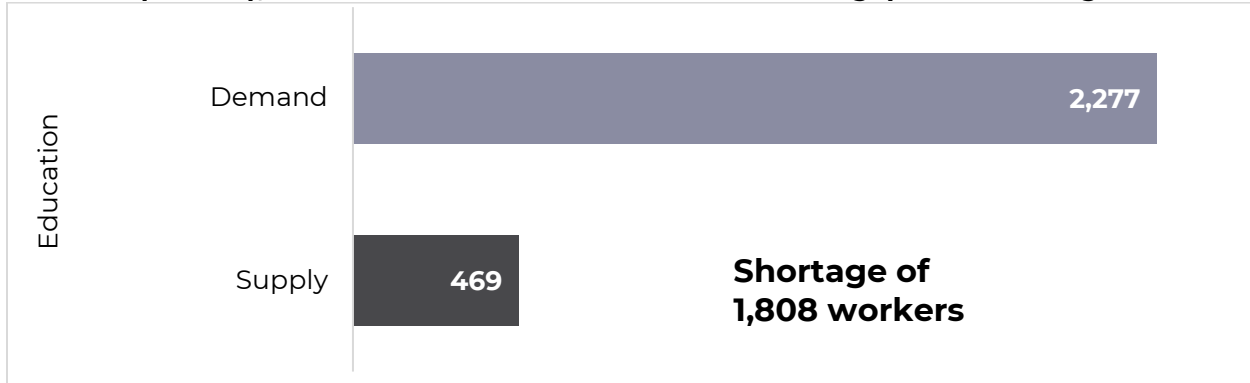
Exhibit 69. Community college education programs that have issued awards over the last three academic years, 2021-2024

TOP Code – TOP Title	3-Year Average Awards	Colleges Issuing Awards
080200 - Educational Aide (Teacher Assistant)	2	2
130500 - Child Development/Early Care and Education	401	4
130520 - Children with Special Needs	9	1
130540 - Preschool Age Children	39	1
130560 - Parenting and Family Education	0	1
130580 - Child Development Administration and Management	10	3
130590 - Infants and Toddlers	2	1
Total	463	-

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 1,808 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 10 education program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 080210 - Educational Aide (Teacher Assistant), Bilingual
- 080900 - Special Education
- 083560 - Coaching
- 083610 - Recreation Assistant
- 085010 - Sign Language Interpreting
- 086000 - Educational Technology
- 089900 - Other Education
- 130550 - The School Age Child
- 130570 - Foster and Kinship Care
- 130800 - Family Studies



Energy, Construction & Utilities

Summary

- There were more than 22,000 middle-skill energy, construction, and utilities jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 1,300 jobs through 2029, growing by 6%. There are nearly 2,200 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 \$27.34 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were nearly 1,400 job ads posted in the CVML-N subregion for the top energy, construction, and utilities occupations profiled in this report. The top job titles were electricians, heavy equipment operators, and plumbing 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 53%. 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.

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

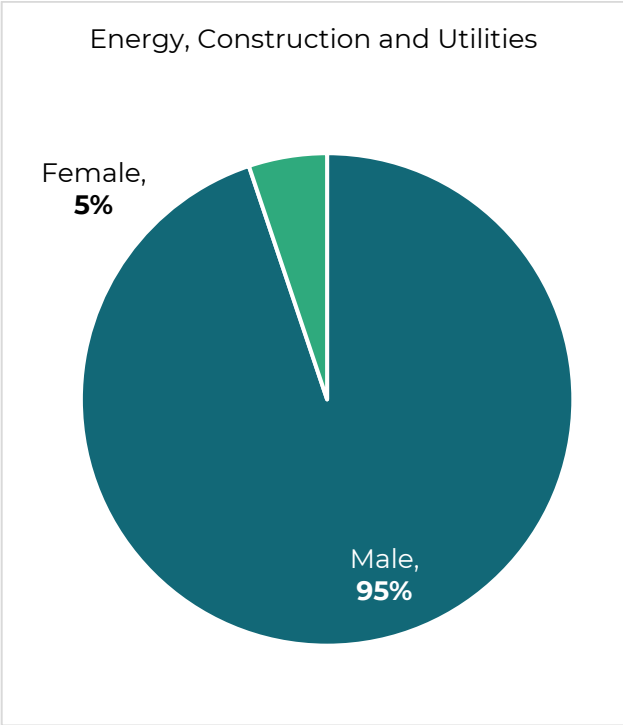


Exhibit 72. Race/ethnicity composition of the energy, construction, and utilities workforce

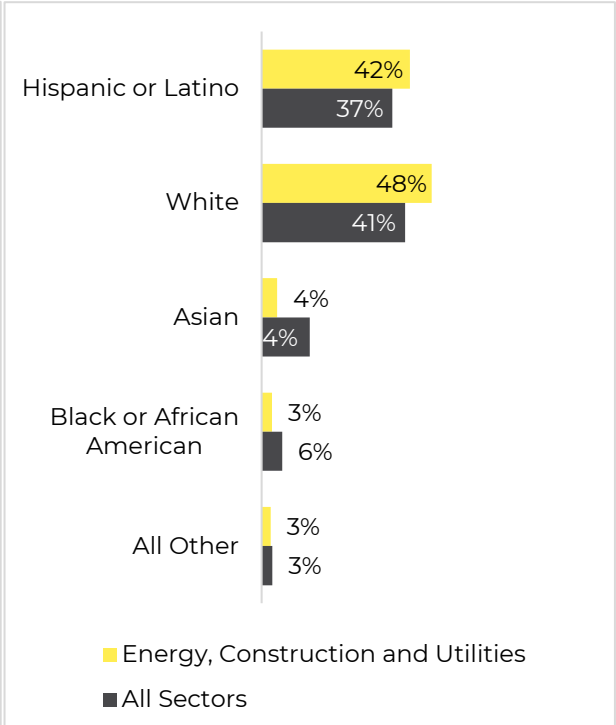
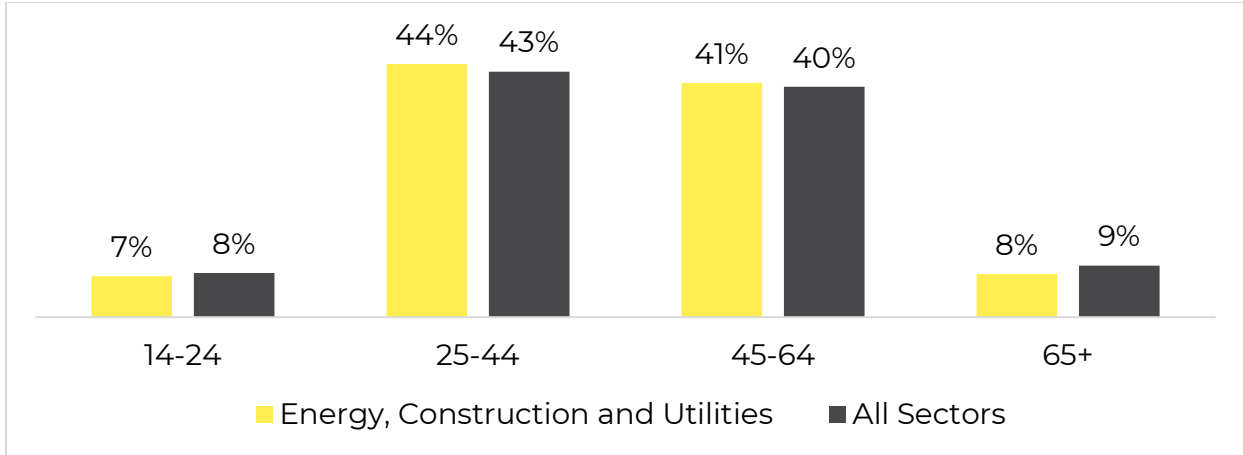


Exhibit 73. Energy, construction, and utilities workforce composition by age cohorts



Energy, Construction & Utilities Demand

Exhibit 74 displays energy, construction, and utilities employment and occupational projections. There were more than 22,000 middle-skill energy, construction, and utilities jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 1,300 jobs through 2029, growing by 6%. There are nearly 2,200 annual job openings projected for energy, construction, and utilities workers over this timeframe. Carpenters are projected to have the most annual job openings through 2029.

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

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Carpenters	4,938	5,038	100	2%	416
Electricians	2,603	2,900	297	11%	299
First-Line Supervisors of Construction Trades and Extraction Workers	2,775	2,960	186	7%	261
Operating Engineers and Other Construction Equipment Operators	1,884	2,032	148	8%	192
Plumbers, Pipefitters, and Steamfitters	1,657	1,751	94	6%	163
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,394	1,486	92	7%	138
Installation, Maintenance, and Repair Workers, All Other	1,109	1,156	46	4%	118
Water and Wastewater Treatment Plant and System Operators	692	721	29	4%	71
Construction and Building Inspectors	444	464	21	5%	52
Solar Photovoltaic Installers	271	351	80	30%	45
Cabinetmakers and Bench Carpenters	456	444	(12)	(3%)	44

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Telecommunications Equipment Installers and Repairers, Except Line Installers	411	395	(16)	(4%)	41
Sheet Metal Workers	289	316	27	9%	32
Architectural and Civil Drafters	335	346	11	3%	30
Security and Fire Alarm Systems Installers	235	260	25	11%	29
Top Jobs Total	19,494	20,620	1,126	6%	1,932
<i>All other</i>	<i>2,517</i>	<i>2,659</i>	<i>143</i>	<i>6%</i>	<i>253</i>
Total	22,011	23,279	1,268	6%	2,185

Energy, Construction & Utilities Hourly Earnings

Exhibit 75 displays the hourly earnings for the top middle-skill energy, construction, and utilities occupations in the CVML-N subregion. First-line supervisors of construction trades and extraction workers have the highest entry-level hourly earnings in the energy, construction, and utilities occupational group at \$32.16 per hour.

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

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
First-Line Supervisors of Construction Trades and Extraction Workers	\$32.16	\$40.26	\$52.59
Operating Engineers and Other Construction Equipment Operators	\$29.69	\$36.41	\$56.57
Water and Wastewater Treatment Plant and System Operators	\$29.48	\$37.73	\$44.21
Construction and Building Inspectors	\$28.69	\$39.53	\$51.72
Architectural and Civil Drafters	\$26.25	\$31.27	\$37.33
Telecommunications Equipment Installers and Repairers, Except Line Installers	\$26.18	\$33.49	\$40.78
Security and Fire Alarm Systems Installers	\$25.90	\$30.58	\$36.65
Electricians	\$24.89	\$34.62	\$45.95
Sheet Metal Workers	\$24.75	\$34.15	\$45.31
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$23.51	\$29.89	\$38.30
Carpenters	\$23.23	\$29.23	\$38.36
Plumbers, Pipefitters, and Steamfitters	\$22.89	\$28.79	\$38.05
Solar Photovoltaic Installers	\$22.02	\$27.21	\$31.57
Installation, Maintenance, and Repair Workers, All Other	\$19.81	\$22.82	\$29.44
Cabinetmakers and Bench Carpenters	\$18.29	\$22.16	\$26.47

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 \$27.34 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top energy, construction, and utilities occupations was \$33.35 per hour over the last 12 months.

Exhibit 76. Average energy, construction, and utilities hourly earnings in the subregion, 2024

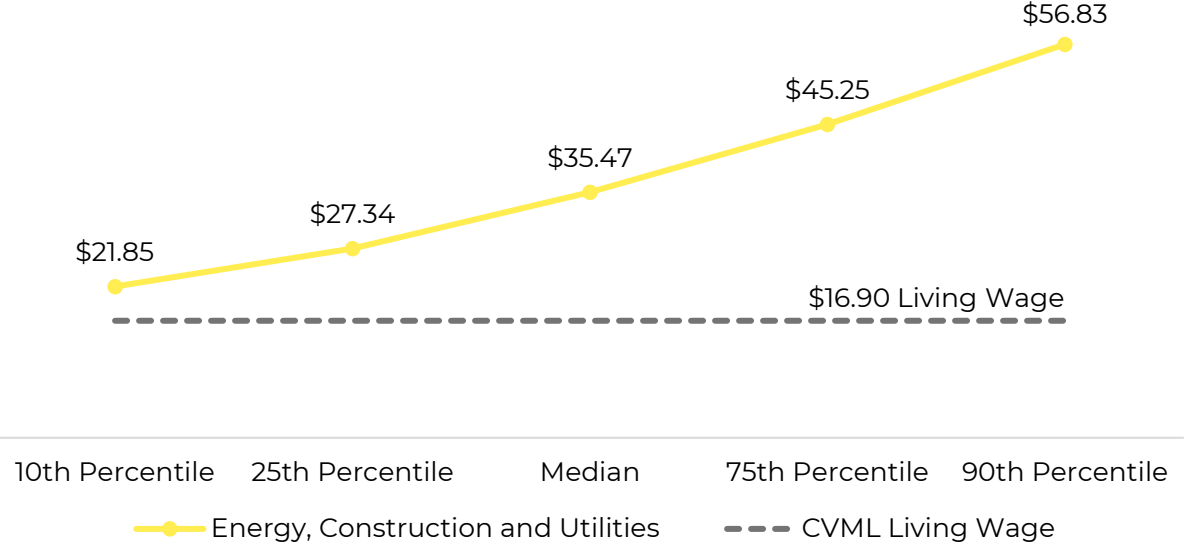


Exhibit 77 displays the certifications, specialized skills, and soft skills included in employer job ads for energy, construction, and utilities workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 1,400 job advertisements posted for the top energy, construction, and utilities occupations detailed in this report. Nearly 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 & C)	Construction	Communication
EPA 608 Technician Certification	Lifting Ability	Troubleshooting (Problem Solving)
10-Hour OSHA General Industry Card	Hand Tools	Customer Service
Cardiopulmonary Resuscitation (CPR) Certification	HVAC	Operations
First Aid Certification	Plumbing	Detail Oriented
30-Hour OSHA General Industry Card	Good Driving Record	Management
EPA Universal Certification	Power Tool Operation	Computer Literacy
Certified Mold Remediation Technician	Electrical Wiring	Leadership
Journeyman Electrician	Blueprinting	Writing

Certifications	Specialized Skills	Soft Skills
Tanker Endorsement	Electrical Systems	Professionalism

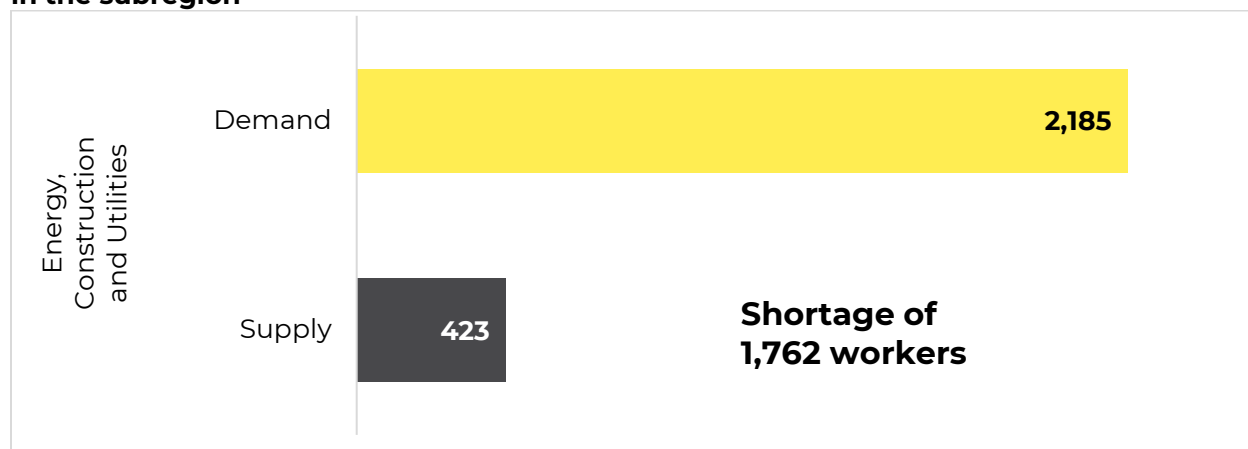
Exhibit 78 displays the community college energy, construction, and utilities programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 145 awards over the last three academic years from four colleges. Other postsecondary institutions issued 278 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 423 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	3	1
093500 - Electro-Mechanical Technology	4	2
094600 - Environmental Control Technology (HVAC)	31	2
095220 - Electrical	80	3
095300 - Drafting Technology	14	1
095640 - Sheet Metal and Structural Metal	6	1
095800 - Water and Wastewater Technology	7	1
Total	145	-

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 1,762 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 17 energy, construction, and utilities program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 029900 - Other Architecture and Environmental Design
- 093440 - Electrical Systems and Power Transmission
- 094610 - Energy Systems Technology
- 095200 - Construction Crafts Technology
- 095210 - Carpentry
- 095230 - Plumbing, Pipefitting and Steamfitting
- 095240 - Glazing
- 095250 - Mill and Cabinet Work
- 095260 - Masonry, Tile, Cement, Lath and Plaster
- 095270 - Painting, Decorating, and Flooring
- 095280 - Drywall and Insulation
- 095290 - Roofing
- 095310 - Architectural Drafting
- 095320 - Civil Drafting
- 095700 - Civil and Construction Management Technology
- 095720 - Construction Inspection
- 0210210 - Public Works



Health

Summary

- There were over 72,900 middle-skill health jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 8,400 jobs through 2029, growing by 11%. There are nearly 10,300 annual job openings projected for health workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$28.32 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were more than 12,200 job ads posted in the CVML-N subregion for the top health occupations profiled in this report. The top job titles were registered nurses, caregivers, behavior technicians, and pharmacy technicians.
- Specialized skills: The top skill is nursing care, and the top certification is registered nurse (RN).

Health Demographics

Comprising 19% of the middle-skill health workforce, men are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 47%. The health workforce contains more 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

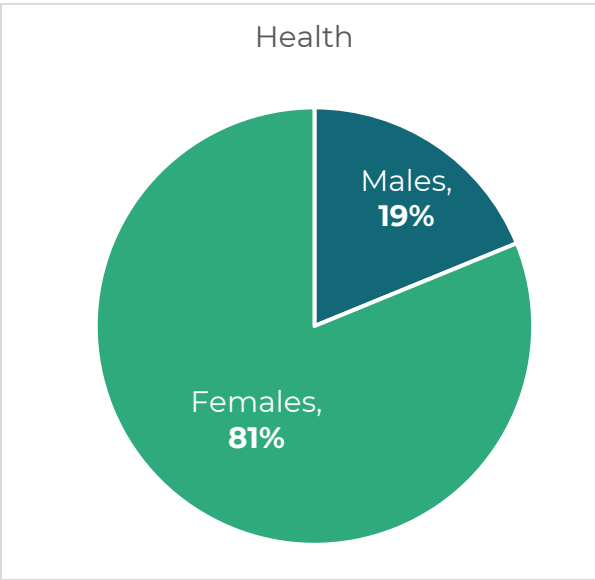


Exhibit 81. Race/ethnicity composition of the health workforce

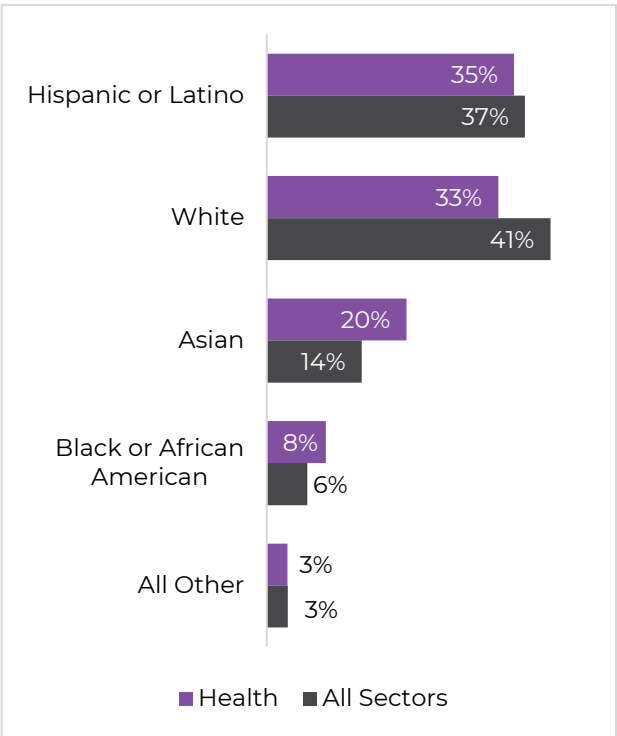
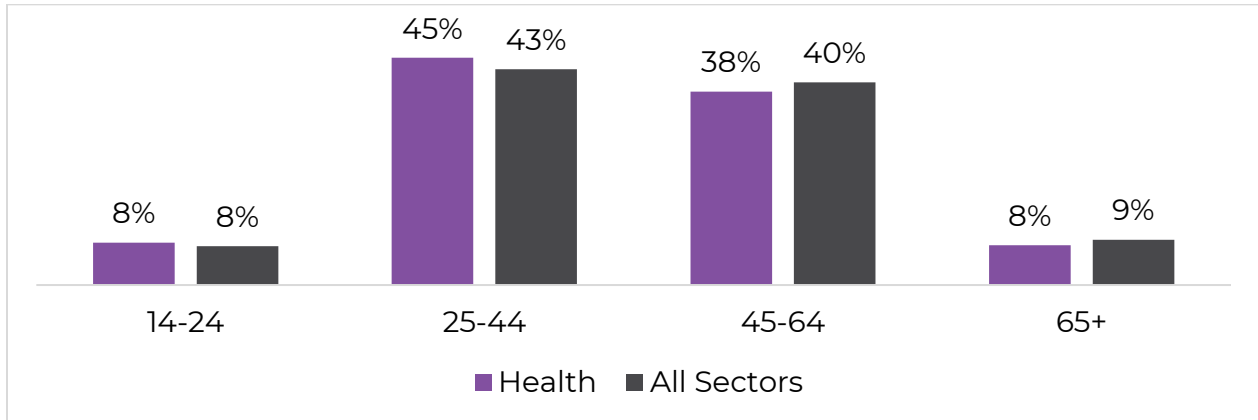


Exhibit 82. Health workforce composition by age cohorts



Health Demand

Exhibit 83 displays health employment and occupational projections. There were over 72,900 middle-skill health jobs in the CVML-N subregion in 2024. This occupational group is projected to add nearly 8,400 jobs through 2029, growing by 11%. There are nearly 10,300 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Home Health and Personal Care Aides	27,840	33,045	5,205	19%	5,474
Registered Nurses	12,050	12,634	585	5%	747
Nursing Assistants	4,448	4,816	367	8%	721
Medical Assistants	3,959	4,385	426	11%	618
Medical Secretaries and Administrative Assistants	3,197	3,402	205	6%	369
Dental Assistants	2,021	2,167	146	7%	306
Social and Human Service Assistants	2,380	2,588	208	9%	290
Licensed Practical and Licensed Vocational Nurses	2,889	3,091	202	7%	277
Pharmacy Technicians	1,664	1,722	58	3%	168
Massage Therapists	748	872	124	17%	126
Healthcare Support Workers, All Other	633	661	29	5%	90
Emergency Medical Technicians	936	1,000	65	7%	86
Health Technologists and Technicians, All Other	855	954	100	12%	84
Psychiatric Technicians	655	729	74	11%	71

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Clinical Laboratory Technologists and Technicians	836	882	45	5%	64
Top Jobs Total	65,111	72,950	7,838	12%	9,491
<i>All other</i>	<i>7,800</i>	<i>8,321</i>	<i>521</i>	<i>7%</i>	<i>779</i>
Total	72,911	81,271	8,360	11%	10,270

Health Hourly Earnings

Exhibit 84 displays the hourly earnings for the top middle-skill health occupations in the CVML-N subregion. Registered nurses have the highest entry-level hourly earnings in the health occupational group at \$27.24 per hour.

Exhibit 84. Health hourly earnings in the subregion, 2024

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Registered Nurses	\$57.24	\$68.78	\$81.82
Licensed Practical and Licensed Vocational Nurses	\$31.59	\$36.10	\$38.02
Psychiatric Technicians	\$29.57	\$36.50	\$45.45
Clinical Laboratory Technologists and Technicians	\$24.51	\$34.19	\$39.00
Health Technologists and Technicians, All Other	\$22.59	\$25.96	\$32.13
Social and Human Service Assistants	\$21.26	\$25.54	\$29.82
Nursing Assistants	\$20.51	\$21.57	\$22.75
Pharmacy Technicians	\$19.84	\$22.81	\$28.36
Healthcare Support Workers, All Other	\$19.81	\$24.80	\$28.86
Dental Assistants	\$19.78	\$23.44	\$28.12
Medical Assistants	\$19.65	\$22.38	\$28.28
Medical Secretaries and Administrative Assistants	\$19.51	\$22.71	\$26.98
Emergency Medical Technicians	\$19.38	\$21.01	\$24.79
Massage Therapists	\$16.90	\$21.14	\$40.12
Home Health and Personal Care Aides	\$16.90	\$16.90	\$16.90

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 \$28.32 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top health occupations was \$28.92 per hour over the last 12 months.

Exhibit 85. Average health hourly earnings in the subregion, 2024

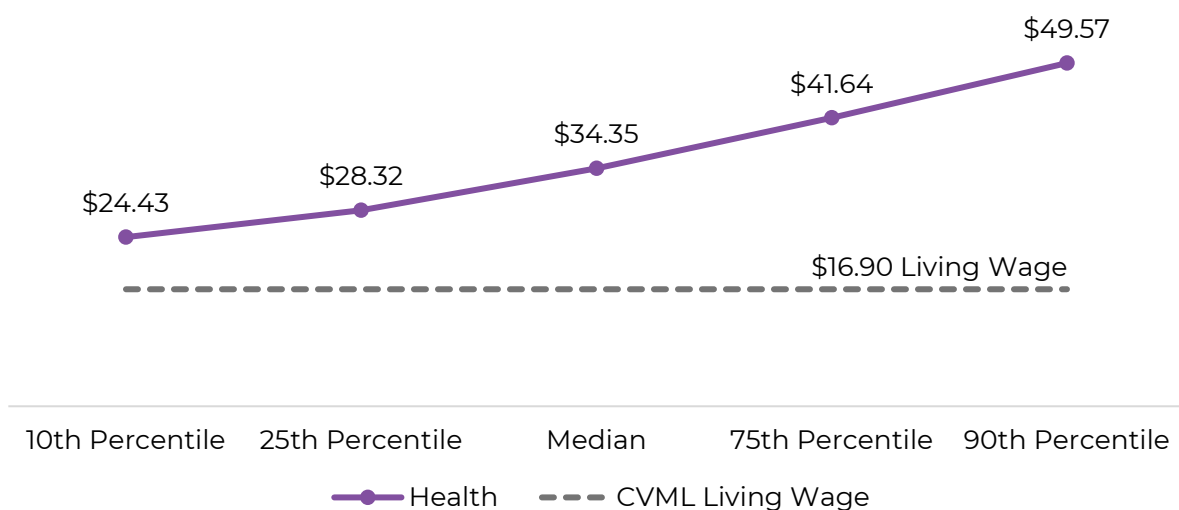


Exhibit 86 displays the certifications, specialized skills, and soft skills included in employer job ads for health workers. Over the last 12 months, from February 2025 to January 2026, there were more than 12,200 job advertisements posted for the top health occupations detailed in this report. Over 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	Medical Records	Customer Service
Valid Driver's License (CDL Class C)	Caregiving	Leadership
Cardiopulmonary Resuscitation (CPR) Certification	Vital Signs	Management
Advanced Cardiovascular Life Support (ACLS) Certification	Home Health Care	Coordinating
Certified Nursing Assistant (CNA)	Cardiopulmonary Resuscitation (CPR)	Planning
Licensed Vocational Nurse (LVN)	Medication Administration	Confidentiality
Licensed Practical Nurse (LPN)	Medical Terminology	Compassion
First Aid Certification	Infection Control	Time Management
Pediatric Advanced Life Support (PALS)	Electronic Medical Record	Operations

Exhibit 87 displays the community college health programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 1,177 awards over the last three academic years from four colleges. Other postsecondary institutions issued 846 awards annually in related programs over the last three

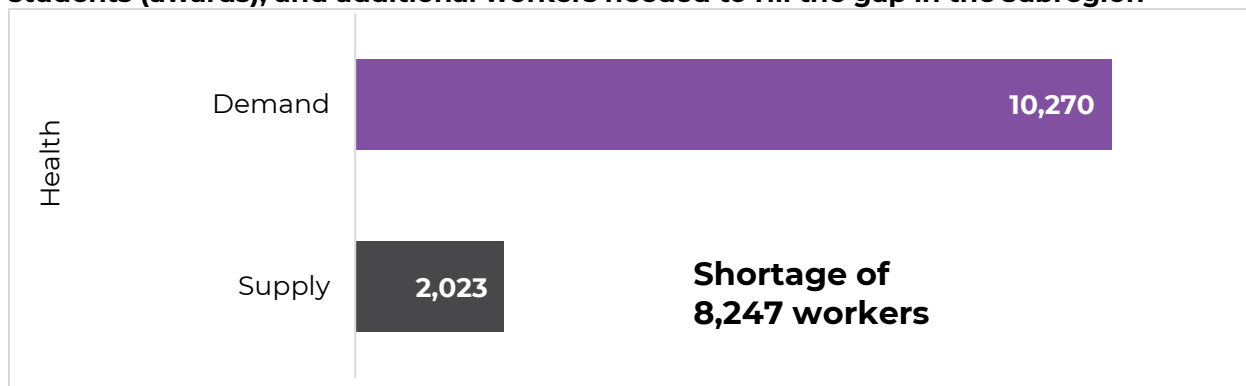
academic years. Combined, postsecondary institutions in the subregion issued 2,023 awards annually in health programs. See the appendix to view award data by postsecondary institution.

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	66	2
093470 - Electron Microscopy	13	1
120100 - Health Occupations, General	217	3
120800 - Medical Assisting	119	2
120820 - Administrative Medical Assisting	3	1
121000 - Respiratory Care/Therapy	31	1
122000 - Speech-Language Pathology and Audiology	33	1
122500 - Radiologic Technology	27	2
122700 - Diagnostic Medical Sonography	5	1
122800 - Athletic Training and Sports Medicine	7	1
123010 - Registered Nursing	265	3
123020 - Licensed Vocational Nursing	40	1
123030 - Certified Nurse Assistant	115	2
123900 - Psychiatric Technician	63	1
125000 - Emergency Medical Services	59	3
125100 - Paramedic	1	1
126000 - Health Professions, Transfer Core Curriculum	78	1
130600 - Nutrition, Foods, and Culinary Arts	4	2
130620 - Dietetic Services and Management	6	1
130900 - Gerontology	5	1
210440 - Alcohol and Controlled Substances	19	3
Total	1,177	-

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 8,247 workers in the subregion’s health workforce.

Exhibit 88. Health 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 health sector. The following 30 health program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 120200 - Hospital and Health Care Administration
- 120500 - Medical Laboratory Technology
- 120510 - Phlebotomy
- 120600 - Physician Assistant
- 120810 - Clinical Medical Assisting
- 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
- 121800 - Occupational Therapy Technology
- 121900 - Optical Technology
- 122100 - Pharmacy Technology
- 122200 - Physical Therapist Assistant
- 122300 - Health Information Technology
- 122310 - Health Information Coding
- 122400 - School Health Clerk
- 122600 - Radiation Therapy Technician
- 123000 - Nursing
- 123080 - Home Health Aide
- 124000 - Dental Occupations
- 124010 - Dental Assistant
- 124020 - Dental Hygienist
- 124030 - Dental Laboratory Technician
- 126100 - Community Health Care Worker
- 129900 - Other Health Occupations
- 130660 - Dietetic Technology

ICT/Digital Media

Summary

- There were nearly 23,500 middle-skill ICT/digital media jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 500 jobs through 2029, growing by 2%. There are more than 2,600 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 \$24.46 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were nearly 2,000 job ads posted in the CVML-N subregion for the top ICT/digital media occupations profiled in this report. The top job titles were administrative assistant, office assistant, executive assistant, and photographer.
- Specialized skills: The top skill is data entry, and the top certification is a Valid Driver's License.

ICT/Digital Media Demographics

Comprising 20% 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 47%. 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

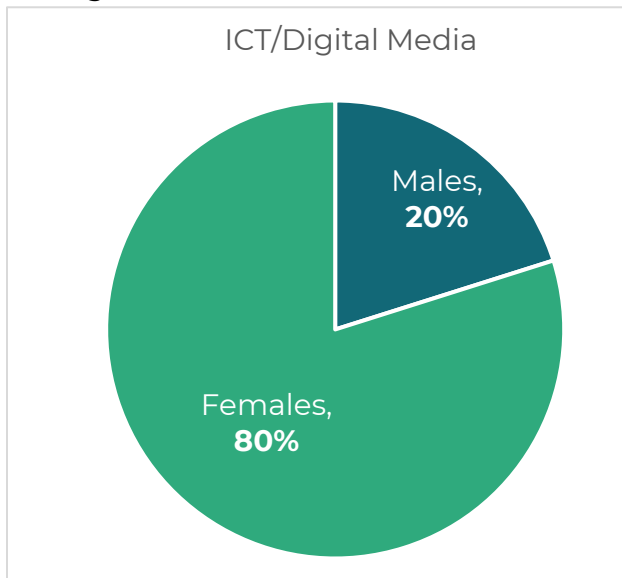


Exhibit 90. Race/ethnicity composition of the ICT/digital media workforce

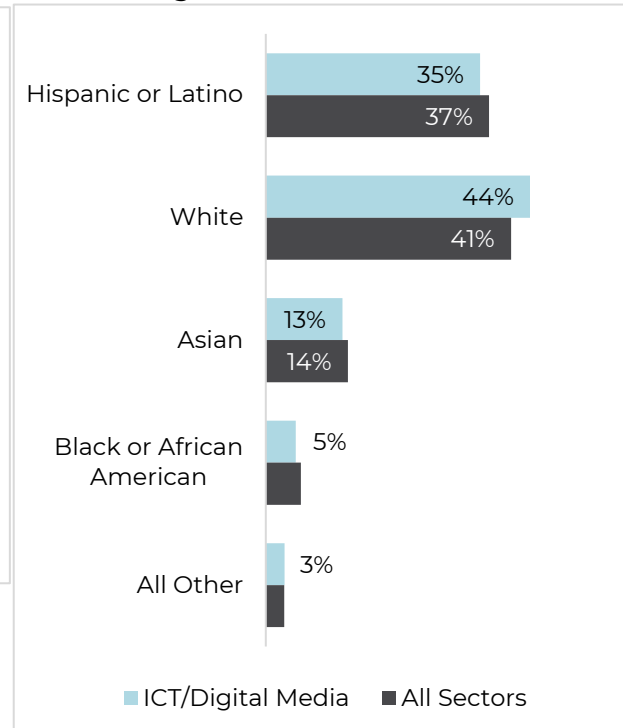
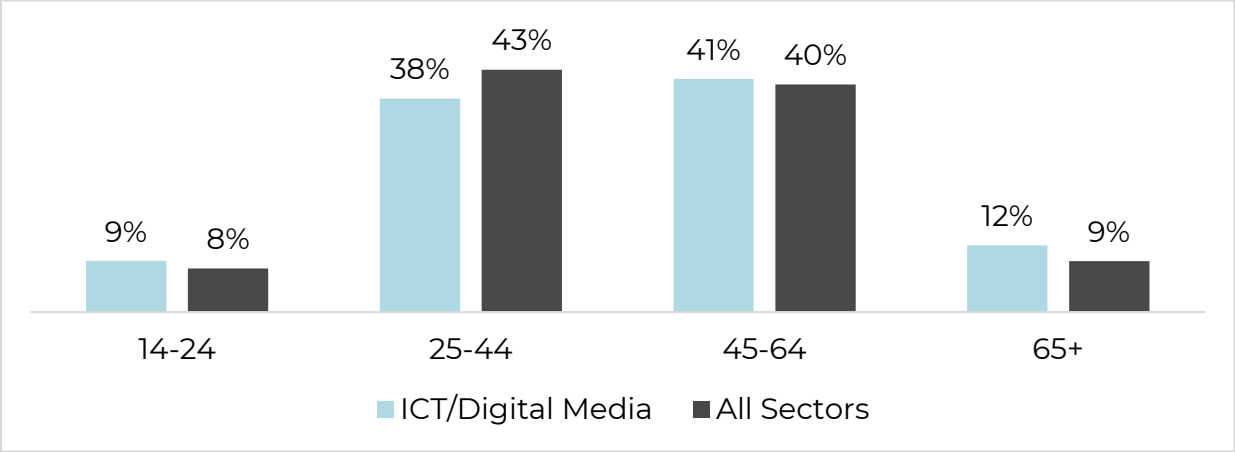


Exhibit 91. ICT/digital media workforce composition by age cohorts



ICT/Digital Media Demand

Exhibit 92 displays ICT/digital media employment and occupational projections. There were nearly 23,500 middle-skill ICT/digital media jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 500 jobs through 2029, growing by 2%. There are more than 2,600 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Office Clerks, General	10,628	10,744	116	1%	1,281
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	6,538	6,815	277	4%	787
Executive Secretaries and Executive Administrative Assistants	1,358	1,402	44	3%	150
Computer User Support Specialists	1,242	1,310	68	5%	95
Data Entry Keyers	416	381	(36)	(9%)	45
Word Processors and Typists	378	320	(58)	(15%)	41
Telecommunications Line Installers and Repairers	354	353	(2)	(0%)	34
Photographers	350	358	8	2%	33
Network and Computer Systems Administrators	518	533	15	3%	31
Procurement Clerks	290	290	0	0%	27
Web and Digital Interface Designers	312	319	7	2%	24
Computer Network Support Specialists	227	245	18	8%	19
Surveying and Mapping Technicians	120	130	10	8%	17

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Audio and Video Technicians	172	180	8	5%	17
Audiovisual Equipment Installers and Repairers	157	160	3	2%	16
Top Jobs Total	23,062	23,540	478	2%	2,616
<i>All other</i>	432	458	26	6%	34
Total	23,493	23,998	504	2%	2,649

ICT/Digital Media Hourly Earnings

Exhibit 93 displays the hourly earnings for the top middle-skill ICT/digital media occupations in the CVML-N subregion. Network and computer systems administrators have the highest entry-level hourly earnings in the ICT/digital media occupational group at \$37.83 per hour.

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

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
Network and Computer Systems Administrators	\$37.83	\$45.50	\$56.65
Executive Secretaries and Executive Administrative Assistants	\$31.89	\$38.32	\$45.06
Telecommunications Line Installers and Repairers	\$31.42	\$44.43	\$47.18
Web and Digital Interface Designers	\$30.31	\$43.31	\$66.35
Computer Network Support Specialists	\$28.79	\$36.33	\$45.23
Audiovisual Equipment Installers and Repairers	\$27.03	\$28.32	\$31.60
Computer User Support Specialists	\$26.53	\$31.12	\$38.37
Surveying and Mapping Technicians	\$25.03	\$32.84	\$38.42
Procurement Clerks	\$21.87	\$26.28	\$30.75
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$20.84	\$24.37	\$28.93
Word Processors and Typists	\$20.44	\$22.03	\$23.97
Audio and Video Technicians	\$19.14	\$25.98	\$34.32
Office Clerks, General	\$18.49	\$22.28	\$26.62
Data Entry Keyers	\$17.75	\$20.27	\$23.25
Photographers	\$16.90	\$26.49	\$49.68

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 \$24.46 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top ICT/digital media occupations was \$24.74 per hour over the last 12 months.

Exhibit 94. Average ICT/digital media hourly earnings in the subregion, 2024

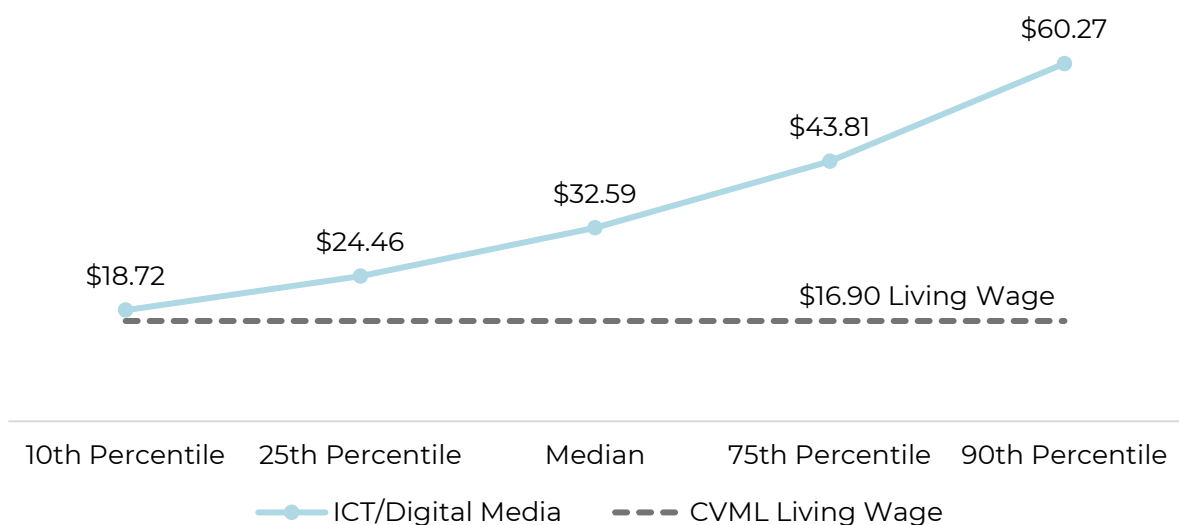


Exhibit 95 displays the certifications, specialized skills, and soft skills included in employer job ads for ICT/digital media workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 2,000 job advertisements posted for the top ICT/digital media occupations detailed in 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 (CDL Class C)	Data Entry	Communication
Typing Certification	Administrative Support	Operations
CompTIA A+	Office Equipment	Clerical Works
Cardiopulmonary Resuscitation (CPR) Certification	Invoicing	Management
First Aid Certification	Office Supply Management	Customer Service
Microsoft Certified Professional	Accounting	Detail Oriented
CompTIA Network+	Technical Support	Filing
CompTIA Certification	Proofreading	Writing
Security Clearance	Punctuation and Capitalization	Microsoft Office
Cisco Certified Network Associate	Purchasing	Administrative Functions

Exhibit 96 displays the community college ICT/digital media programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 363 awards over the last three academic years from four colleges. Other postsecondary institutions issued 36 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 399

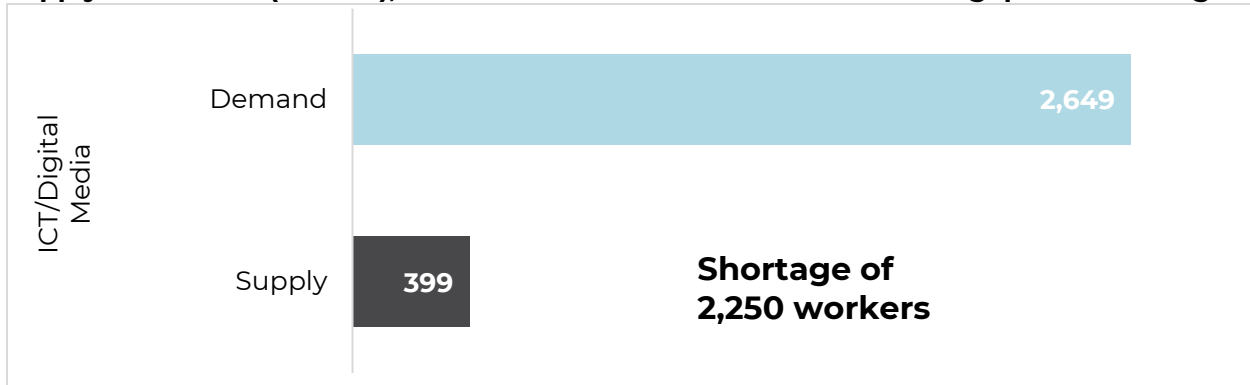
awards annually in ICT/digital media programs. See the appendix to view award data by postsecondary institution.

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	152	3
060200 - Journalism	3	1
060400 - Radio and Television	2	1
061000 - Mass Communications	2	1
061400 - Digital Media	17	3
061410 - Multimedia	3	1
061460 - Computer Graphics and Digital Imagery	33	1
070100 - Information Technology, General	14	3
070200 - Computer Information Systems	39	3
070210 - Software Applications	2	2
070710 - Computer Programming	10	4
070730 - Computer Systems Analysis	1	1
070800 - Computer Infrastructure and Support	6	1
070810 - Computer Networking	36	3
100500 - Commercial Music	9	1
101200 - Applied Photography	5	3
103000 - Graphic Art and Design	15	1
220610 - Geographic Information Systems	14	1
Total	363	-

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 2,250 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 18 ICT/digital program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 060410 - Radio
- 060420 - Television (including combined TV-film-video)
- 060430 - Broadcast Journalism
- 060700 - Technical Communication
- 061220 - Film Production
- 061420 - Electronic Game Design
- 061430 - Website Design and Development
- 061440 - Animation
- 061450 - Desktop Publishing
- 069900 - Other Media and Communications
- 070700 - Computer Software Development
- 070720 - Database Design and Administration
- 070820 - Computer Support
- 070900 - World Wide Web Administration
- 070910 - E-Commerce (technology emphasis)
- 079900 - Other Information Technology
- 093430 - Telecommunications Technology
- 101300 - Commercial Art



Public Safety

Summary

- There were over 14,400 middle-skill public safety jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 800 jobs through 2029, growing by 6%. There are over 1,600 annual job openings projected for public safety workers over this timeframe.
- The average entry-level hourly earnings for the middle-skill occupational group is \$32.95 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were nearly 2,200 job ads posted in the CVML-N subregion for the top public safety occupations profiled in this report. The top job titles were security officers, border patrol agents, and police officers.
- 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 26% of the middle-skill public safety workforce, women are underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 53%. 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 60% of workers aged 44 or younger.

Exhibit 98. Gender composition of the public safety workforce

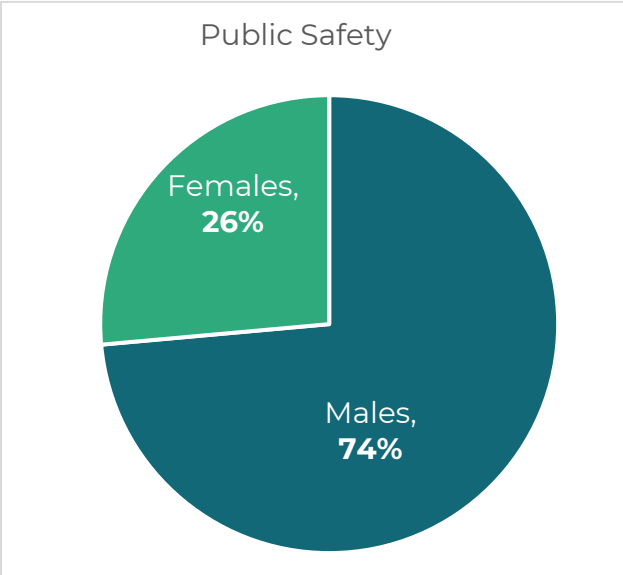


Exhibit 99. Race/ethnicity composition of the public safety workforce

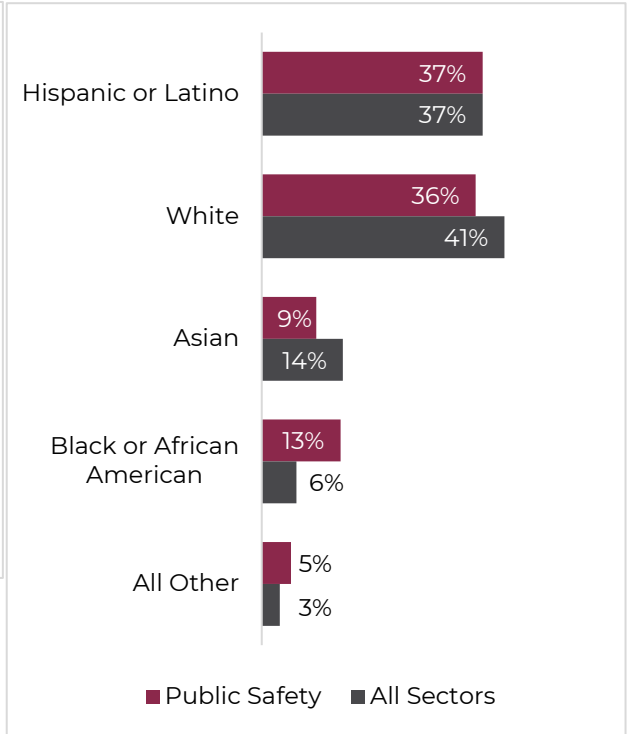
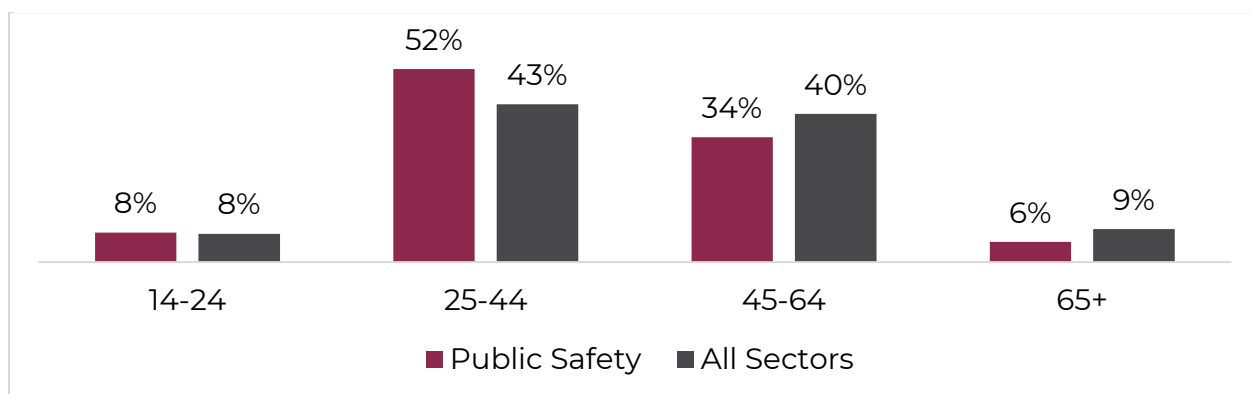


Exhibit 100. Public safety workforce composition by age cohorts



Public Safety Demand

Exhibit 101 displays public safety employment and occupational projections. There were over 14,400 middle-skill public safety jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 800 jobs through 2029, growing by 6%. There are over 1,600 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-N subregion, 2024-2029

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
Security Guards	4,730	5,122	393	8%	709
Correctional Officers and Jailers	2,741	2,731	(10)	(0%)	251
Police and Sheriff's Patrol Officers	2,670	2,852	182	7%	241
Firefighters	1,385	1,482	97	7%	125
Public Safety Telecommunicators	406	432	26	6%	50
First-Line Supervisors of Police and Detectives	580	619	40	7%	46
First-Line Supervisors of Firefighting and Prevention Workers	462	491	30	6%	35
First-Line Supervisors of Correctional Officers	258	267	10	4%	24
Private Detectives and Investigators	239	246	7	3%	23
First-Line Supervisors of Security Workers	169	188	20	12%	22
Forensic Science Technicians	141	154	13	9%	21
Life, Physical, and Social Science Technicians, All Other	138	147	10	7%	20
Fire Inspectors and Investigators	161	167	6	4%	14
Detectives and Criminal Investigators	134	148	14	11%	13

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
First-Line Supervisors of Protective Service Workers, All Other	108	113	5	5%	12
Top Jobs Total	14,319	15,159	841	6%	1,605
<i>All other</i>	82	86	4	5%	10
Total	14,401	15,246	845	6%	1,616

Public Safety Hourly Earnings

Exhibit 102 displays the hourly earnings for the top middle-skill public safety occupations in the CVML-N subregion. First-line supervisors of correctional officers have the highest entry-level hourly earnings in the public safety occupational group at \$57.95 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	\$57.95	\$61.82	\$70.32
First-Line Supervisors of Police and Detectives	\$56.15	\$62.81	\$76.07
Detectives and Criminal Investigators	\$41.66	\$50.69	\$60.62
First-Line Supervisors of Firefighting and Prevention Workers	\$41.61	\$48.65	\$59.38
Police and Sheriff's Patrol Officers	\$39.61	\$49.09	\$54.41
Correctional Officers and Jailers	\$37.92	\$48.51	\$51.48
Forensic Science Technicians	\$32.68	\$38.50	\$45.36
First-Line Supervisors of Protective Service Workers, All Other	\$31.53	\$35.84	\$43.61
Firefighters	\$28.18	\$34.68	\$41.09
Fire Inspectors and Investigators	\$27.13	\$31.13	\$48.92
Public Safety Telecommunicators	\$25.97	\$32.75	\$40.87
First-Line Supervisors of Security Workers	\$25.89	\$32.71	\$36.95
Life, Physical, and Social Science Technicians, All Other	\$21.92	\$28.95	\$38.06
Private Detectives and Investigators	\$21.63	\$29.21	\$38.99
Security Guards	\$17.48	\$18.29	\$22.72

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 \$32.95 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top public safety occupations was \$21.91 per hour over the last 12 months.

Exhibit 103. Average public safety hourly earnings in the subregion, 2024

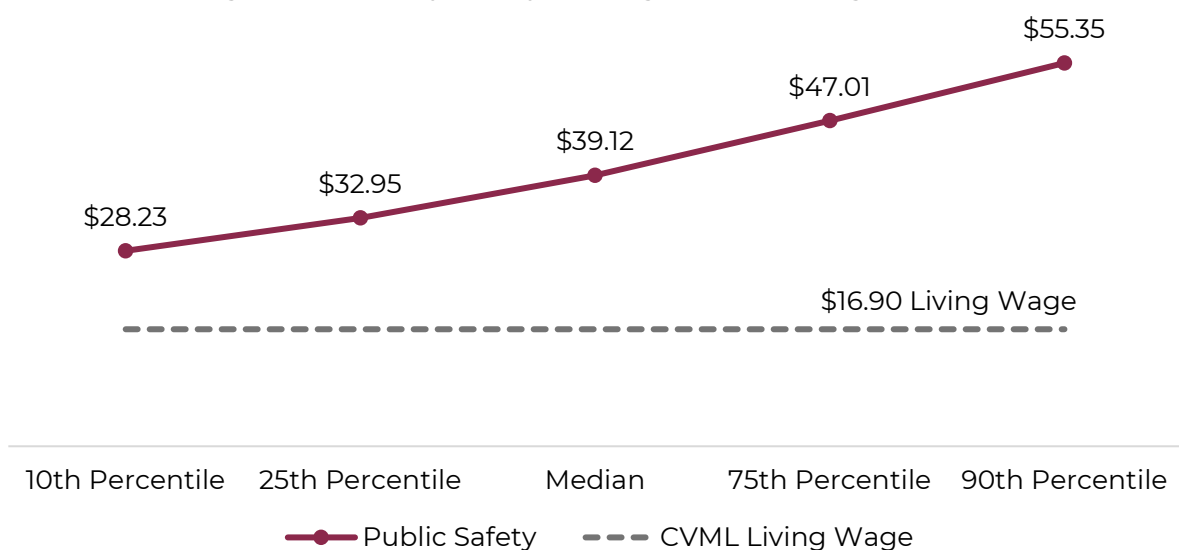


Exhibit 104 displays the certifications, specialized skills, and soft skills included in employer job ads for public safety workers. Over the last 12 months, from February 2025 to January 2026, there were nearly 2,200 job advertisements posted for the top public safety occupations detailed in this report. Nearly 60% 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	Customer Service
First Aid Certification	Emergency Response	Communication
Cardiopulmonary Resuscitation (CPR) Certification	Access Controls	Problem Solving
Automated External Defibrillator (AED) Certification	Patrolling	Investigation
Basic Life Support (BLS) Certification	Alarm Devices	Operations
Security Guard License	First Aid	Report Writing
Peace Officer Standards And Training (POST) Certificate	Guarding	Professionalism
Typing Certification	Contraband Detection And Control	Management
Certified First Responder (CFR)	Good Driving Record	Writing
Emergency Medical Technician (EMT)	Crime Prevention	Incident Reporting

Exhibit 105 displays the community college public safety programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 425 awards over the last three academic years from four colleges. Other postsecondary institutions issued six awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 469 awards

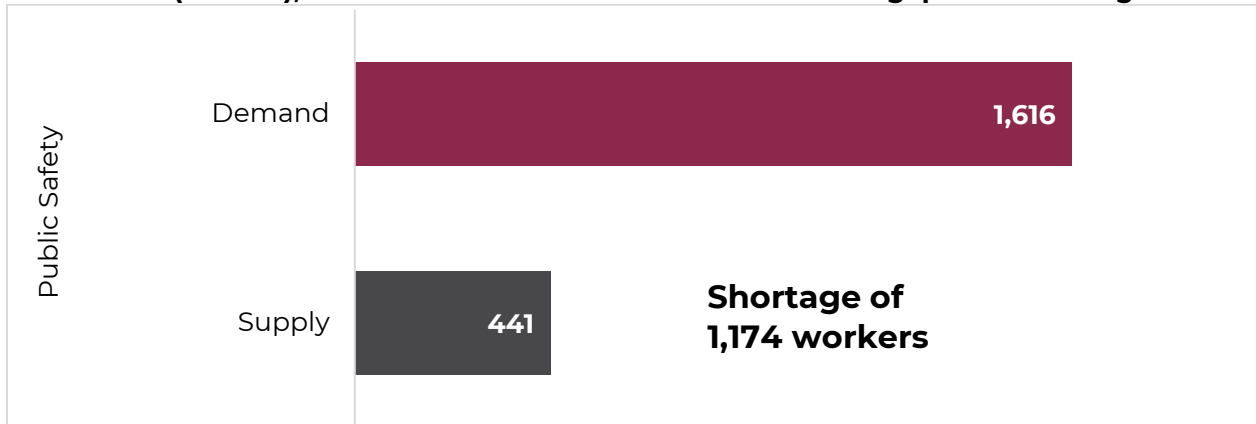
annually in public safety programs. See the appendix to view award data by postsecondary institution.

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	265	3
210510 - Corrections	8	1
210550 - Police Academy	39	1
213300 - Fire Technology	86	3
213350 - Fire Academy	27	1
Total	425	-

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 1,174 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 present opportunities to expand public safety program offerings. The following five public safety program codes have not issued awards in the CVML-N subregion over the last three academic years.

- 210520 - Probation and Parole
- 210530 - Industrial and Transportation Security
- 210540 - Forensics, Evidence, and Investigation
- 213310 - Wildland Fire Technology
- 219900 - Other Public and Protective Services

Retail, Hospitality & Tourism

Summary

- There were over 21,400 middle-skill retail, hospitality, and tourism jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 1,500 jobs through 2029, growing by 7%. There are more than 3,000 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 \$19.18 per hour, which is above the \$16.90 living wage in the CVML-N subregion.
- There were nearly 5,100 job ads posted in the CVML-N subregion for the top retail, hospitality, and tourism occupations profiled in this report. The top job titles were shift supervisors, assistant store managers, and general managers.
- Specialized skills: The top skill is merchandising, and the top certification after a Valid Driver's License is ServSafe® Certification.

Retail, Hospitality & Tourism Demographics

Comprising 44% of the middle-skill retail, hospitality, and tourism workforce, women are slightly underrepresented in this sector when compared to the middle-skill workforce across all sectors, at 53%. The retail, hospitality, and tourism workforce contains more Asian American workers than the overall middle-skill workforce. Retail, hospitality, and tourism workers are considerably younger than the middle skill workforce overall, with 55% of workers aged 44 or younger.

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

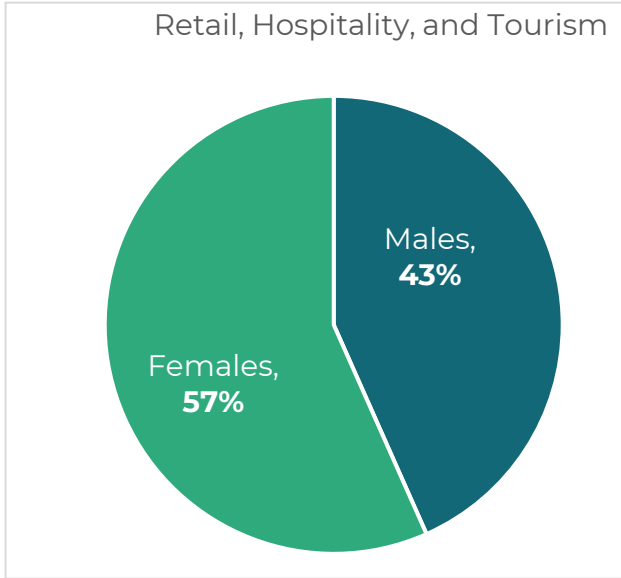


Exhibit 108. Race/ethnicity composition of the retail, hospitality, and tourism workforce

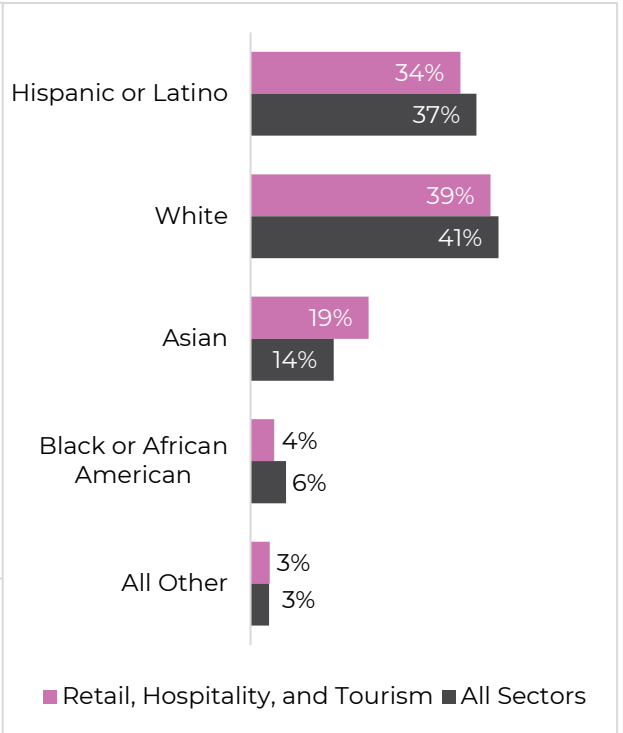


Exhibit 109. Retail, hospitality, and tourism workforce composition by age cohorts



Retail, Hospitality & Tourism Demand

Exhibit 110 displays retail, hospitality, and tourism employment and occupational projections. There were over 21,400 middle-skill retail, hospitality, and tourism jobs in the CVML-N subregion in 2024. This occupational group is projected to add over 1,500 jobs through 2029, growing by 7%. There are more than 3,000 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-N 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	4,613	5,033	420	9%	774
First-Line Supervisors of Retail Sales Workers	5,902	5,978	76	1%	608
Hairdressers, Hairstylists, and Cosmetologists	2,708	2,915	207	8%	402
Exercise Trainers and Group Fitness Instructors	1,222	1,307	85	7%	257
Food Service Managers	1,688	1,863	175	10%	232
Manicurists and Pedicurists	1,427	1,611	184	13%	206
Chefs and Head Cooks	772	869	97	13%	116
First-Line Supervisors of Housekeeping and Janitorial Workers	818	892	74	9%	116
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	726	768	42	6%	86
Tour and Travel Guides	213	236	23	11%	57
First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	450	476	26	6%	53

Occupation	2024 Jobs	2029 Jobs	5-Year Change	5-Year % Change	Annual Job Openings
First-Line Supervisors of Personal Service Workers	417	447	30	7%	52
Lodging Managers	164	182	18	11%	21
First-Line Supervisors of Gambling Services Workers	145	158	13	9%	18
Travel Agents	83	99	16	19%	14
Top Jobs Total	21,349	22,835	1,487	7%	3,012
<i>All other</i>	86	104	18	21%	14
Total	21,435	22,939	1,504	7%	3,026

Retail, Hospitality & Tourism Hourly Earnings

Exhibit 111 displays the hourly earnings for the top middle-skill retail, hospitality, and tourism occupations in the CVML-N subregion. First-line supervisors of gambling services workers have the highest entry-level hourly earnings in the retail, hospitality, and tourism occupational group at \$26.02 per hour.

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

Occupation	Hourly Wages		
	25 th Percentile	Median	75 th Percentile
First-Line Supervisors of Gambling Services Workers	\$26.02	\$28.76	\$31.68
Lodging Managers	\$23.37	\$33.09	\$42.13
First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	\$20.48	\$23.91	\$29.30
First-Line Supervisors of Retail Sales Workers	\$18.83	\$23.09	\$29.20
First-Line Supervisors of Housekeeping and Janitorial Workers	\$18.64	\$25.80	\$34.20
First-Line Supervisors of Food Preparation and Serving Workers	\$18.45	\$21.79	\$24.93
Food Service Managers	\$18.29	\$27.33	\$37.88
Chefs and Head Cooks	\$18.27	\$27.53	\$34.76
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$17.40	\$25.77	\$35.62
Tour and Travel Guides	\$16.92	\$21.73	\$28.42
Exercise Trainers and Group Fitness Instructors	\$16.90	\$22.31	\$31.96
First-Line Supervisors of Personal Service Workers	\$16.90	\$22.40	\$29.32
Manicurists and Pedicurists	\$16.90	\$16.90	\$18.31
Hairdressers, Hairstylists, and Cosmetologists	\$16.90	\$17.38	\$26.02
Travel Agents	\$16.90	\$19.53	\$31.02

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 \$19.18 per hour, which is above the \$16.90 living wage in the CVML-N subregion. The median advertised salary for the top retail, hospitality, and tourism occupations was \$24.00 per hour over the last 12 months.

Exhibit 112. Average retail, hospitality, and tourism hourly earnings in the subregion, 2024



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 5,100 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	Merchandising	Customer Service
ServSafe Certification	Restaurant Operation	Management
Food Handler's Card	Retail Operations	Communication
Cosmetology License	Cash Handling	Sales
Barber License	Lifting Ability	Leadership
Cardiopulmonary Resuscitation (CPR) Certification	Food Safety And Sanitation	Operations
Automated External Defibrillator (AED) Certification	Inventory Management	Cleanliness
Personal Trainer Certification	Sanitation	Coaching
Registered Pharmacist (RPh)	Marketing	Scheduling
First Aid Certification	Retail Sales	Writing

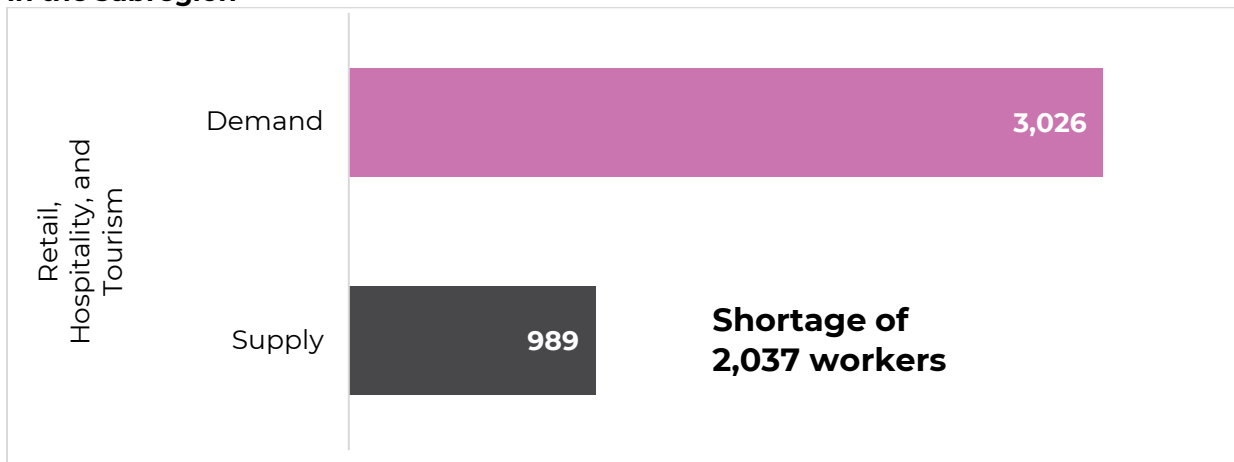
Exhibit 114 displays the community college retail, hospitality, and tourism programs in the CVML-N subregion that have issued awards over the last three academic years. Subregional community colleges issued an average of 83 awards over the last three academic years from four colleges. Other postsecondary institutions issued 906 awards annually in related programs over the last three academic years. Combined, postsecondary institutions in the subregion issued 989 awards annually in advanced manufacturing 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	6	2
051440 - Office Management	10	1
130200 - Interior Design and Merchandising	7	1
130310 - Fashion Design	2	1
130320 - Fashion Merchandising	3	1
130630 - Culinary Arts	51	3
130710 - Restaurant and Food Services and Management	5	1
Total	83	-

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 2,037 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 14 retail, hospitality, and tourism program codes have not issued awards in the CVML-N 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
- 130300 - Fashion
- 130700 - Hospitality
- 130720 - Lodging Management
- 130730 - Resort and Club Management
- 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 more than 35,500 job openings annually in the subregion over the next five years. Subregional postsecondary institutions have conferred an average of 6,783 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 28,750 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	10,270	2,023	8,247
Business and Entrepreneurship	5,242	1,012	4,231
Advanced Transportation and Logistics	4,195	293	3,902
Retail, Hospitality, and Tourism	3,026	989	2,037
ICT/Digital Media	2,649	399	2,250
Education	2,277	469	1,808
Agriculture, Water, and Environmental Technologies	2,234	389	1,845
Energy, Construction, and Utilities	2,185	423	1,762
Advanced Manufacturing	1,839	345	1,494
Public Safety	1,616	441	1,174
Total	35,533	6,783	28,750

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

- Health: 8,247 workers
- Business and Entrepreneurship: 4,231 workers
- Advanced Transportation and Logistics: 3,902 workers

Sectors with the smallest workforce supply gaps include public safety (a shortage of 1,174 workers) and advanced manufacturing (a shortage of 1,494 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 (2,023 awards), the business and entrepreneurship sector (1,012 awards), and the retail, hospitality, and tourism sector (989 awards). The advanced transportation and logistics sector has issued the fewest awards (293), followed by advanced manufacturing (345) and agriculture, water, and environmental technologies (389).

The health sector is projected to have the highest demand for middle-skill workers over the next five years, accounting for nearly 29% of the subregion's projected demand for middle-skill workers. Advanced transportation and logistics, ICT/digital media, and agriculture, water, and environmental technologies, and advanced manufacturing 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 agriculture and advanced manufacturing. Retail, hospitality, and tourism, public safety, and education have the smallest supply gaps in proportion to their 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:**
 - *Industrial Quality Control (0956.80)*
 - This program prepares students for employment as Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061), which pays workers \$18.63 per hour at the entry level and \$23.03 per hour at the median, with 317 job openings projected annually over the next five years.
- **Advanced Transportation and Logistics:**
 - *Truck and Bus Driving (0947.50)*
 - This program prepares students for employment like Heavy and Tractor-Trailer Truck Drivers (53-3032), which is projected to have 2,350 annual job openings over the next five years and pays workers \$21.73 per hour at the entry level.
- **Agriculture, Water, and Environmental Technologies:**
 - *Environmental Technology (0303.00)*
 - This program prepares students for employment like Environmental Science and Protection Technicians, Including Health (19-4042), which is projected to have 59 annual job openings over the next five years and pays workers \$22.38 per hour at the median.
- **Business and Entrepreneurship Sector:**
 - *Insurance (0512.00)*
 - This program prepares students for employment as an Insurance Sales Agent (41-3021), which is projected to have 201 annual job openings over the next five years and pays an entry-level wage of \$22.98 per hour, with workers earning \$30.33 per hour at the median level.
 - Additionally, insurance programs can prepare students for employment as Claims Adjusters, Examiners, and Investigators (13-1031), which is not displayed in detail in this report, as it has lower annual job openings than other occupations in the sector. This occupation is projected to have 35 annual job openings over the next five years and pays entry-level workers \$33.49 per hour.
 - Sign Language Interpreting
- **Education Sector:**
 - *Special Education (0809.00)*
 - This program prepares students for employment as Special Education Teachers, Kindergarten and Elementary School (25-2052), which is projected to have 66 annual job openings over the next five years and

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 region 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)	Merced College	2
093400 - Electronics and Electric Technology	Merced College	4
	San Joaquin Delta College	1
093410 - Computer Electronics	Merced College	7
	Modesto Junior College	4
093420 - Industrial Electronics	Modesto Junior College	19
094300 - Instrumentation Technology	Modesto Junior College	7
094500 - Industrial Systems Technology and Maintenance	Merced College	2
	Modesto Junior College	0
	San Joaquin Delta College	1
095340 - Mechanical Drafting	Merced College	4
	San Joaquin Delta College	8
095600 - Manufacturing and Industrial Technology	Modesto Junior College	12
095630 - Machining and Machine Tools	Modesto Junior College	14
	San Joaquin Delta College	2
095650 - Welding Technology	Columbia College	7
	Merced College	125
	Modesto Junior College	38
	San Joaquin Delta College	35
130330 - Fashion Production	San Joaquin Delta College	1
47.0303 - Industrial Mechanics and Maintenance Technology/Technician	San Joaquin Valley College-Modesto	51
Grand Total		345

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	Modesto Junior College	6
	San Joaquin Delta College	5

TOP6 or CIP with Title	College	3-Year Average Awards
094700 - Diesel Technology	San Joaquin Delta College	10
094720 - Heavy Equipment Maintenance	San Joaquin Delta College	64
094800 - Automotive Technology	Columbia College	12
	Merced College	76
	Modesto Junior College	18
	San Joaquin Delta College	67
094900 - Automotive Collision Repair	Modesto Junior College	29
	San Joaquin Delta College	6
Grand Total		293

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	Merced College	11
	Modesto Junior College	14
010200 - Animal Science	Merced College	17
	Modesto Junior College	20
	San Joaquin Delta College	1
010210 - Veterinary Technician (Licensed)	Modesto Junior College	57
010220 - Artificial Inseminator (Licensed)	Modesto Junior College	7
010230 - Dairy Science	Modesto Junior College	5
010240 - Equine Science	Merced College	1
	Modesto Junior College	5
010300 - Plant Science	Merced College	13
	Modesto Junior College	10
	San Joaquin Delta College	2
010900 - Horticulture	Merced College	5
	Modesto Junior College	2
	San Joaquin Delta College	3
010910 - Landscape Design and Maintenance	San Joaquin Delta College	2
010920 - Floriculture /Floristry	Modesto Junior College	1
010930 - Nursery Technology	Modesto Junior College	0

TOP6 or CIP with Title	College	3-Year Average Awards
	San Joaquin Delta College	1
011200 - Agriculture Business, Sales and Service	Merced College	34
	Modesto Junior College	25
	San Joaquin Delta College	3
011400 - Forestry	Columbia College	13
011500 - Natural Resources	Columbia College	15
011600 - Agricultural Power Equipment Technology	Merced College	57
	Modesto Junior College	21
	San Joaquin Delta College	2
019900 - Other Agriculture and Natural Resources	Modesto Junior College	5
01.8301 - Veterinary/Animal Health Technology/Technician and Veterinary Assistant	Carrington College-Stockton	23
	Stellar Career College	14
Grand Total		389

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	Columbia College	2
	Merced College	23
	San Joaquin Delta College	176
050200 - Accounting	Columbia College	2
	Merced College	21
	Modesto Junior College	25
	San Joaquin Delta College	90
050210 - Tax Studies	San Joaquin Delta College	9
050500 - Business Administration	Columbia College	14
	Merced College	102
	Modesto Junior College	184
	San Joaquin Delta College	123
050600 - Business Management	Columbia College	8
	Modesto Junior College	18
050630 - Management Development and Supervision	Merced College	37
	Modesto Junior College	4

TOP6 or CIP with Title	College	3-Year Average Awards
	San Joaquin Delta College	4
050640 - Small Business and Entrepreneurship	Columbia College	3
	Merced College	8
	Modesto Junior College	8
	San Joaquin Delta College	5
050800 - International Business and Trade	Modesto Junior College	1
050900 - Marketing and Distribution	Merced College	6
	Modesto Junior College	3
	San Joaquin Delta College	1
051100 - Real Estate	Merced College	12
	Modesto Junior College	57
	San Joaquin Delta College	34
059900 - Other Business and Management	San Joaquin Delta College	1
22.0001 - Pre-Law Studies	Humphreys University-Stockton and Modesto Campuses	5
22.0302 - Legal Assistant/Paralegal	Humphreys University-Stockton and Modesto Campuses	4
22.0303 - Court Reporting and Captioning/Court Reporter	Humphreys University-Stockton and Modesto Campuses	1
51.3501 - Massage Therapy/Therapeutic Massage	Carrington College-Stockton	9
52.0201 - Business Administration and Management, General	Humphreys University-Stockton and Modesto Campuses	3
52.0301 - Accounting	Humphreys University-Stockton and Modesto Campuses	1
52.0302 - Accounting Technology/Technician and Bookkeeping	Stellar Career College	6
Grand Total		1,012

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)	Modesto Junior College	1
	San Joaquin Delta College	1
130500 - Child Development/Early Care and Education	Columbia College	21
	Merced College	89
	Modesto Junior College	224

TOP6 or CIP with Title	College	3-Year Average Awards
	San Joaquin Delta College	67
130520 - Children with Special Needs	Modesto Junior College	9
130540 - Preschool Age Children	San Joaquin Delta College	39
130560 - Parenting and Family Education	Merced College	0
130580 - Child Development Administration and Management	Merced College	1
	Modesto Junior College	7
	San Joaquin Delta College	3
130590 - Infants and Toddlers	Merced College	2
13.1210 - Early Childhood Education and Teaching	Humphreys University-Stockton and Modesto Campuses	6
Grand Total		469

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	San Joaquin Delta College	3
093500 - Electro-Mechanical Technology	Modesto Junior College	0
	San Joaquin Delta College	4
094600 - Environmental Control Technology (HVAC)	Merced College	19
	San Joaquin Delta College	12
095220 - Electrical	Merced College	23
	Modesto Junior College	7
	San Joaquin Delta College	50
095300 - Drafting Technology	San Joaquin Delta College	14
095640 - Sheet Metal and Structural Metal	Modesto Junior College	6
095800 - Water and Wastewater Technology	Columbia College	7
46.0302 - Electrician	San Joaquin Valley College-Modesto	117
	UEI College-Stockton	32
47.0201 - Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	DeHart Technical School	54
	UEI College-Stockton	75
Grand Total		423

Exhibit B7. Postsecondary supply for the health workforce

TOP6 or CIP with Title	College	3-Year Average Awards
051420 - Medical Office Technology	Merced College	45
	San Joaquin Delta College	21
093470 - Electron Microscopy	San Joaquin Delta College	13
120100 - Health Occupations, General	Columbia College	37
	Modesto Junior College	58
	San Joaquin Delta College	122
120800 - Medical Assisting	Merced College	27
	Modesto Junior College	92
120820 - Administrative Medical Assisting	Columbia College	3
121000 - Respiratory Care/Therapy	Modesto Junior College	31
122000 - Speech-Language Pathology and Audiology	San Joaquin Delta College	33
122500 - Radiologic Technology	Merced College	25
	San Joaquin Delta College	2
122700 - Diagnostic Medical Sonography	Merced College	5
122800 - Athletic Training and Sports Medicine	Modesto Junior College	7
123010 - Registered Nursing	Merced College	52
	Modesto Junior College	92
	San Joaquin Delta College	121
123020 - Licensed Vocational Nursing	Merced College	40
123030 - Certified Nurse Assistant	Merced College	89
	Modesto Junior College	26
123900 - Psychiatric Technician	San Joaquin Delta College	63
125000 - Emergency Medical Services	Columbia College	2
	Merced College	42
	Modesto Junior College	15
125100 - Paramedic	Merced College	1
126000 - Health Professions, Transfer Core Curriculum	Merced College	78
130600 - Nutrition, Foods, and Culinary Arts	Columbia College	1
	Merced College	4
130620 - Dietetic Services and Management	Merced College	6

TOP6 or CIP with Title	College	3-Year Average Awards
130900 - Gerontology	Modesto Junior College	5
210440 - Alcohol and Controlled Substances	Merced College	0
	Modesto Junior College	9
	San Joaquin Delta College	10
51.0601 - Dental Assisting/Assistant	Carrington College-Stockton	54
	Milan Institute-Merced	20
	Stellar Career College	2
	UEI College-Stockton	82
51.0710 - Medical Office Assistant/Specialist	San Joaquin Valley College-Modesto	11
	UEI College-Stockton	44
51.0714 - Medical Insurance Specialist/Medical Biller	Carrington College-Stockton	12
51.0716 - Medical Administrative/Executive Assistant and Medical Secretary	Carrington College-Stockton	4
	Milan Institute-Merced	12
	Stellar Career College	5
51.0801 - Medical/Clinical Assistant	Carrington College-Stockton	93
	Milan Institute-Merced	51
	San Joaquin Valley College-Modesto	102
	Stellar Career College	8
	UEI College-Stockton	220
51.0805 - Pharmacy Technician/Assistant	Carrington College-Stockton	22
	San Joaquin Valley College-Modesto	31
51.1012 - Sterile Processing Technology/Technician	Stellar Career College	1
51.3801 - Registered Nursing/Registered Nurse	Xavier College School of Nursing	19
51.3901 - Licensed Practical/Vocational Nurse Training	Xavier College School of Nursing	53
Grand Total		2,023

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	Merced College	90
	Modesto Junior College	43

TOP6 or CIP with Title	College	3-Year Average Awards
	San Joaquin Delta College	19
060200 - Journalism	San Joaquin Delta College	3
060400 - Radio and Television	San Joaquin Delta College	2
061000 - Mass Communications	San Joaquin Delta College	2
061400 - Digital Media	Columbia College	2
	Merced College	5
	San Joaquin Delta College	10
061410 - Multimedia	San Joaquin Delta College	3
061460 - Computer Graphics and Digital Imagery	Modesto Junior College	33
070100 - Information Technology, General	Merced College	5
	Modesto Junior College	8
	San Joaquin Delta College	1
070200 - Computer Information Systems	Columbia College	0
	Merced College	20
	San Joaquin Delta College	19
070210 - Software Applications	Modesto Junior College	1
	San Joaquin Delta College	0
070710 - Computer Programming	Columbia College	4
	Merced College	1
	Modesto Junior College	4
	San Joaquin Delta College	1
070730 - Computer Systems Analysis	Merced College	1
070800 - Computer Infrastructure and Support	Modesto Junior College	6
070810 - Computer Networking	Merced College	3
	Modesto Junior College	6
	San Joaquin Delta College	27
100500 - Commercial Music	Modesto Junior College	9
101200 - Applied Photography	Merced College	1
	Modesto Junior College	3
	San Joaquin Delta College	1
103000 - Graphic Art and Design	San Joaquin Delta College	15

TOP6 or CIP with Title	College	3-Year Average Awards
220610 - Geographic Information Systems	Columbia College	14
52.0401 - Administrative Assistant and Secretarial Science, General	Stellar Career College	0
52.0408 - General Office Occupations and Clerical Services	San Joaquin Valley College-Modesto	5
	UEI College-Stockton	31
Grand Total		399

Exhibit B9. Postsecondary supply for the public safety workforce

TOP6 or CIP with Title	College	3-Year Average Awards
210500 - Administration of Justice	Merced College	73
	Modesto Junior College	97
	San Joaquin Delta College	95
210510 - Corrections	San Joaquin Delta College	8
210550 - Police Academy	San Joaquin Delta College	39
213300 - Fire Technology	Columbia College	50
	Merced College	6
	Modesto Junior College	30
213350 - Fire Academy	Modesto Junior College	27
43.0102 - Corrections	Carrington College-Stockton	1
	San Joaquin Valley College-Modesto	9
43.0103 - Criminal Justice/Law Enforcement Administration	Humphreys University-Stockton and Modesto Campuses	6
43.0109 - Security and Loss Prevention Services	UEI College-Stockton	0
Grand Total		441

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	Modesto Junior College	2
	San Joaquin Delta College	4
051440 - Office Management	San Joaquin Delta College	10
130200 - Interior Design and Merchandising	San Joaquin Delta College	7
130310 - Fashion Design	San Joaquin Delta College	2

TOP6 or CIP with Title	College	3-Year Average Awards
130320 - Fashion Merchandising	San Joaquin Delta College	3
130630 - Culinary Arts	Columbia College	24
	Merced College	5
	San Joaquin Delta College	22
130710 - Restaurant and Food Services and Management	Columbia College	5
12.0401 - Cosmetology/Cosmetologist, General	Adrian's Beauty College of Turlock	25
	California Beauty School	9
	California College of Barbering and Cosmetology	37
	Milan Institute-Merced	28
	North Adrian's College of Beauty Inc	53
	Paul Mitchell the School-Modesto	73
	Sierra College of Beauty	22
12.0402 - Barbering/Barber	California College of Barbering and Cosmetology	32
	Central Valley Barber College	25
	Milan Institute-Merced	8
	North Adrian's College of Beauty Inc	10
	Paul Mitchell the School-Modesto	19
	Sierra College of Beauty	16
12.0409 - Aesthetician/Esthetician and Skin Care Specialist	Adrian's Beauty College of Turlock	20
	California Beauty School	32
	California College of Barbering and Cosmetology	99
	Milan Institute-Merced	39
	North Adrian's College of Beauty Inc	31
	Paul Mitchell the School-Modesto	143
	Sierra College of Beauty	39
12.0410 - Nail Technician/Specialist and Manicurist	Adrian's Beauty College of Turlock	18
	California Beauty School	15
	California College of Barbering and Cosmetology	40
	Milan Institute-Merced	2
	North Adrian's College of Beauty Inc	17
	Paul Mitchell the School-Modesto	34

TOP6 or CIP with Title	College	3-Year Average Awards
	Sierra College of Beauty	19
12.0413 - Cosmetology, Barber/Styling, and Nail Instructor	Adrian's Beauty College of Turlock	0
	California College of Barbering and Cosmetology	1
	North Adrian's College of Beauty Inc	0
Grand Total		989

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%
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training	25.9%
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%
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%
Occupational Health and Safety Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training	30.2%
Printing Press Operators	High school diploma or equivalent	None	Moderate-term on-the-job training	32.1%
Sawing Machine Setters, Operators, and Tenders, Wood	High school diploma or equivalent	None	Moderate-term on-the-job training	18.2%
Welders, Cutters, Solderers, and Brazers	High school diploma or equivalent	None	Moderate-term on-the-job training	30.6%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	High school diploma or equivalent	None	Moderate-term on-the-job training	12.9%

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%
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%
Railroad Conductors and Yardmasters	High school diploma or equivalent	None	Moderate-term on-the-job training	44.0%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Recreational Vehicle Service Technicians	High school diploma or equivalent	None	Long-term on-the-job training	27.7%
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 Technicians	Associate degree	None	Moderate-term on-the-job training	39.8%
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%
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%
Floral Designers	High school diploma or equivalent	None	Moderate-term on-the-job training	36.4%
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%
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%
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%
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%

Occupation	Typical Entry-Level Education	Work Experience Required	Typical On-The-Job Training	Current Population Survey (CPS) Community College Educational Attainment
Sales and Related Workers, All Other	High school diploma or equivalent	None	None	32.5%
Skincare Specialists	Postsecondary nondegree award	None	None	52.6%
Tellers	High school diploma or equivalent	None	Short-term on-the-job training	42.3%

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%
Cabinetmakers and Bench Carpenters	High school diploma or equivalent	None	Moderate-term on-the-job training	23.3%
Carpenters	High school diploma or equivalent	None	Apprenticeship	23.7%
Construction and Building Inspectors	High school diploma or equivalent	5 years or more	Moderate-term on-the-job training	42.4%
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%
Security and Fire Alarm Systems Installers	High school diploma or equivalent	None	Moderate-term on-the-job training	43.5%

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%
Psychiatric Technicians	Postsecondary nondegree award	Less than 5 years	Short-term on-the-job training	39.3%
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
Audiovisual Equipment Installers and Repairers	Postsecondary nondegree award	None	Short-term on-the-job training	40.0%
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%
Fire Inspectors and Investigators	Postsecondary nondegree award	5 years or more	Moderate-term on-the-job training	44.9%
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 Protective Service Workers, All Other	High school diploma or equivalent	Less than 5 years	None	45.5%
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%
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%

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 Gambling Services Workers	High school diploma or equivalent	Less than 5 years	None	42.0%
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%
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.

We extend our sincere appreciation to **State Center Community College District, Chancellor Dr. Carole Goldsmith**, and the **Department of Educational Services and Institutional Effectiveness** for their support and partnership in hosting our regional efforts.

Prepared by the Central Valley/Mother Lode Center of Excellence for Labor Market Research:

Patricia Salinas, District Director

patricia.salinas@scccd.edu

Ignacio Faria, Senior Research and Planning Analyst

ignacio.faria@scccd.edu

Angela Steitz, Program Specialist

angela.steitz@scccd.edu

