

Labor Market Analysis for Program Modification: 2105.00/Administration of Justice (Police Science – Associate Degree)

CVML Center of Excellence, January 2025



Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met ☐	Endorsed: Some LMI Criteria Met ☒	Not LMI Endorsed ☐
Program LMI Endorsement Criteria			
	Yes ☐	No ☒	
Supply Gap:	<i>Comments:</i> There are projected to be 642 annual job openings throughout the SCV/SML subregion for the <i>Police Science-related occupations</i>, which is less than the 946 awards (three-year average) conferred by SCV/SML educational institutions (CC + non-CC). <i>NOTE:</i> The four programs considered in this report also crosswalk to occupations such as <i>Bailiffs, Correctional Officers and Jailers, Forensic Science Technicians, and Private Detectives and Investigators</i>; these yield an additional 800 annual openings in the SCV/SML subregion. Therefore, the supply is overstated.		
	Yes ☒	No ☐	
Living Wage: (Entry-Level, 25 th)	<i>Comments:</i> Both Police Science-related occupations have entry-level hourly wages above the SCV/SML living wage of \$16.08.		
	Yes ☒	No ☐	
Education:	<i>Comments:</i> The entry-level education for the occupations of interest is a high school diploma or equivalent. Between 28% and 46% of workers in the field have completed some college or an associate degree as their highest level of education.		
Emerging Occupation(s)			
	Yes ☐	No ☒	
Comments: N/A			

The CVML Center of Excellence for Labor Market Research (CVML COE) prepared this report to determine whether there is a supply gap in the South Central Valley/Southern Mother Lode regional labor market related to the following occupations:

- Detectives and Criminal Investigators (SOC 33-3021)
- Police and Sheriff's Patrol Officers (SOC 33-3051)

Based on the available data, there does not appear to be a supply gap for the *Police Science-related occupations*. This is because the four programs considered in this report also crosswalk to occupations such as *Bailiffs, Correctional Officers and Jailers, Forensic Science Technicians, and Private Detectives and Investigators*; these occupations are not included in this report, yet they have an additional 800 annual openings in the SCV/SML subregion. Therefore, the supply is overstated. Moreover, both occupations offer an entry-level hourly wage above the subregion's living wage. While a high school diploma or equivalent is typically required for entry, 28% to 46% of incumbent workers have completed some college or an associate degree. **Due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the *Police Science-related occupations*.

Exhibit 1: Labor Market Endorsement Summary

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25th percentile)	Typical Entry-Level Education	Community College Educational Attainment
Detectives and Criminal Investigators (33-3021)	NCV/NML: 23 SCV/SML: 92	NCV/NML: 357 SCV/SML: 946	NCV/NML: \$33.14 SCV/SML: \$40.23	High school diploma or equivalent	28%
Police and Sheriff's Patrol Officers (33-3051)	NCV/NML: 229 SCV/SML: 550		NCV/NML: \$38.99 SCV/SML: \$37.14	High school diploma or equivalent	46%
Total	894	1,303			

Demand:

- The number of jobs related to the two *Police Science-related occupations* is projected to increase 11% through 2028. There will be 642 annual job openings (SCV/SML).
- The entry-level hourly wage for the *Police Science-related occupations* is between \$37.14 and \$40.23 in the South Central Valley/Southern Mother Lode subregion.
- There were 396 online job postings for the *Police Science-related occupations* in the past 12 months.
- The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for *Detectives and Criminal Investigators* and *Police and Sheriff's Patrol Officers*.
- Between 28% and 46% of workers in the field have completed some college or an associate degree as their highest level of education.

Supply:

- Between 2020 and 2023, there was an average of 919 awards conferred by community colleges in the SCV/SML subregion.
- Between 2019 and 2022, non-community college institutions in the SCV/SML subregion conferred an average of 27 awards in relevant programs.

Demand

Occupational Projections

Exhibit 2 shows the annual percent change in jobs for the *Police Science-related occupations* from 2018 through 2028. Employment in these occupations experienced a 6% increase in 2022 (SCV/SML); higher than the 5% increase across all occupations in 2022 (CVML). Employment projections through 2028 for the *Police Science-related occupations* are projected to remain steady (no change) in the NCV/NML and SCV/SML subregions.

Exhibit 2: Annual Percent Change for Police Science-related Occupations, 2018-2028

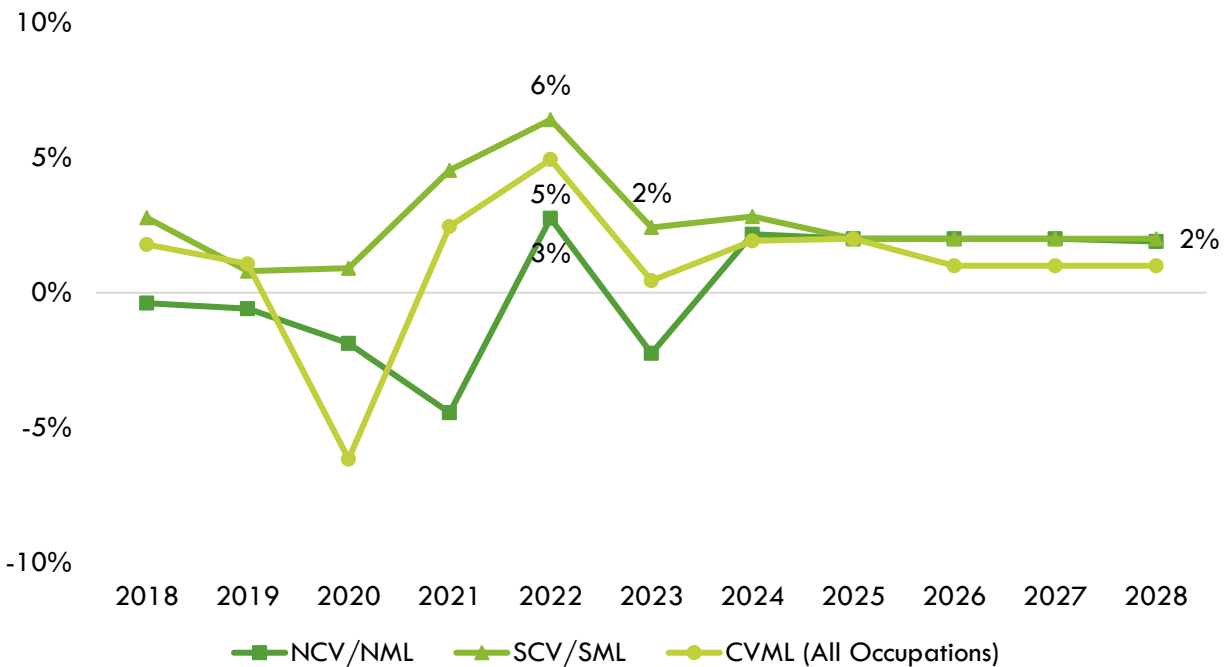


Exhibit 3 shows the five-year occupational demand projections for the two *Police Science-related occupations*. In the SCV/SML subregion, the number of jobs related to these two occupations is projected to increase by 11% through 2028. There are projected to be 642 jobs available annually in the SCV/SML subregion.

Exhibit 3: Occupational Demand in NCV/NML, SCV/SML and CVML¹

Geography	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
NCV/NML	2,604	2,839	235	9%	252
SCV/SML	6,274	6,991	717	11%	642
CVML	8,878	9,830	952	11%	894

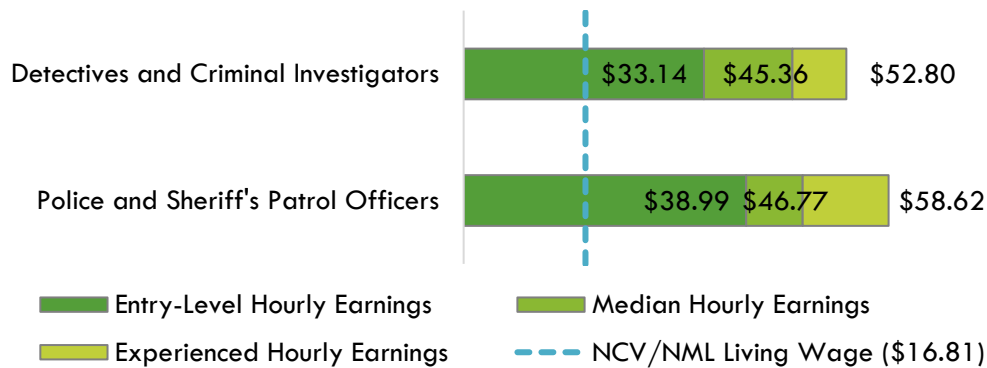
¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Wages:

The labor market endorsement in this report considers the entry-level hourly wages for the two occupations of interest as they relate to the subregions and region's living wage. NCV/NML, SCV/SML, and CVML wages are included below to provide a complete analysis of the subregions and region.

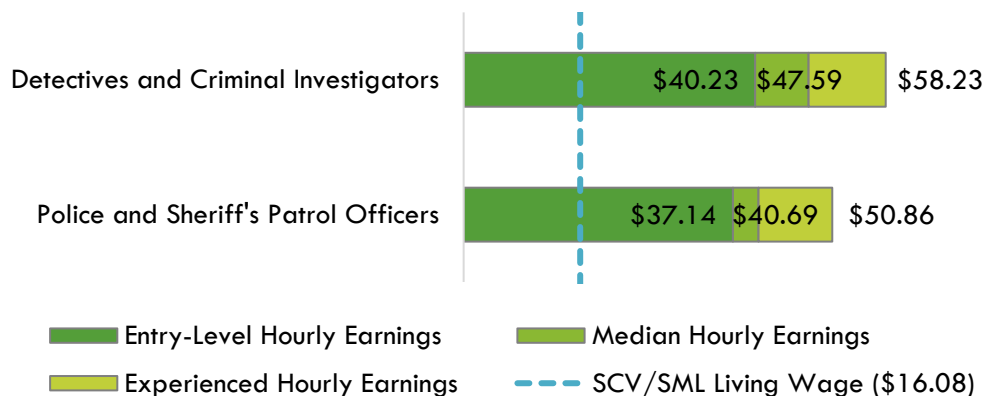
The typical entry-level hourly wage for *Detectives and Criminal Investigators* (\$33.14) and *Police and Sheriff's Patrol Officers* (\$38.99) are above the living wage for one adult in the NCV/NML subregion (\$16.81). The NCV/NML average wage for these occupations is \$47.20, which is below the average statewide wage of \$53.99. Exhibit 4a shows the wage range for the two occupations of interest and how they compare to the NCV/NML subregion's living wage.

Exhibit 4a: Wages by Occupation in NCV/NML



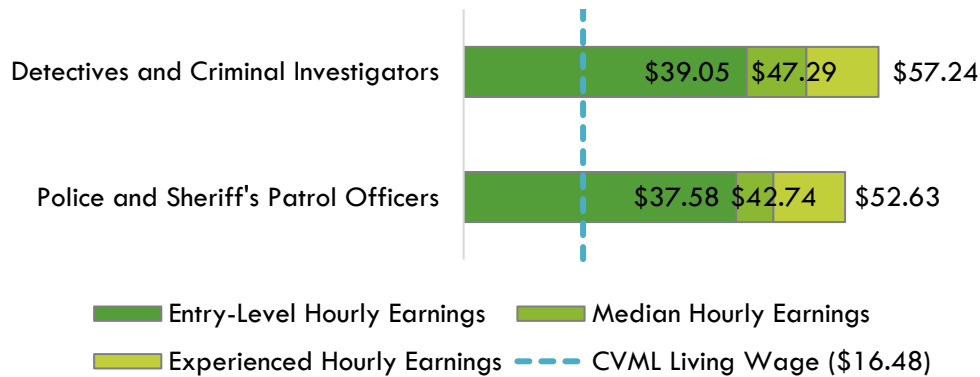
The typical entry-level hourly wage for *Detectives and Criminal Investigators* (\$40.23) and *Police and Sheriff's Patrol Officers* (\$37.14) are above the living wage for one adult in the SCV/SML subregion (\$16.08). The SCV/SML average wage for these occupations is \$44.76, which is below the average statewide wage of \$53.99. Exhibit 4b shows the wage range for the two occupations of interest and how they compare to the SCV/SML subregion's living wage.

Exhibit 4b: Wages by Occupation in SCV/SML



The typical entry-level hourly wage for *Detectives and Criminal Investigators* (\$39.05) and *Police and Sheriff's Patrol Officers* (\$37.58) are above the living wage for one adult in the CVML subregion (\$16.48). The CVML average wage for these occupations is \$45.48, which is below the average statewide wage of \$53.99. Exhibit 5 shows the wage range for the two occupations of interest and how they compare to the CVML living wage.

Exhibit 5: Wages by Occupation in CVML



Job Postings:

Online job postings data is sourced from Lightcast, a labor market analytics firm that scrapes, collects, and organizes data from online job boards such as LinkedIn, Indeed, Glassdoor, Monster, GovernmentJobs.com, and thousands more. Lightcast uses natural language processing (NLP) to determine the related company, industry, occupation, and other information for each job posting. However, NLP has limitations that include understanding contextual words or phrases; determining differences in words that can be used as nouns, verbs, and/or adjectives; and misspellings or grammatical errors. For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast's database.

Additionally, there are several limitations when analyzing job postings. A single job posting may not represent a single job opening, as employers may be creating a pool of candidates for future openings or hiring for multiple positions with a single posting. Additionally, not all jobs are posted online, and jobs may be filled through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

There were 396 online job postings for the two Police Science-related occupations listed in the past 12 months. Exhibit 6 shows the number of job postings for these occupations.

Exhibit 6: Number of Job Postings by Occupation (n=396)

Occupation	Job Postings	Percentage of Job Postings
Police and Sheriff's Patrol Officers	249	63%
Detectives and Criminal Investigators	147	37%

The top employers in the region for the *Police Science-related occupations* by number of job postings are shown in Exhibit 7.

Exhibit 7: Top Employers by Number of Job Postings (n=396)

Employer	Job Postings	Percentage of Job Postings
United States Department of Homeland Security	57	14%
Federal Bureau of Investigation	40	10%
City of Fresno	13	3%
Securitas	9	2%
City of Madera	9	2%
Department of Industrial Relations	9	2%
Stockton Police Department	8	2%
DCS Corporation	6	2%
United States Department of Defense	6	2%
Liberty Healthcare Corporation	6	2%

The top specialized, common, and software skills for the *Police Science-related occupations* listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 8.

Exhibit 8: Top Skills by Number of Job Postings (n=396)

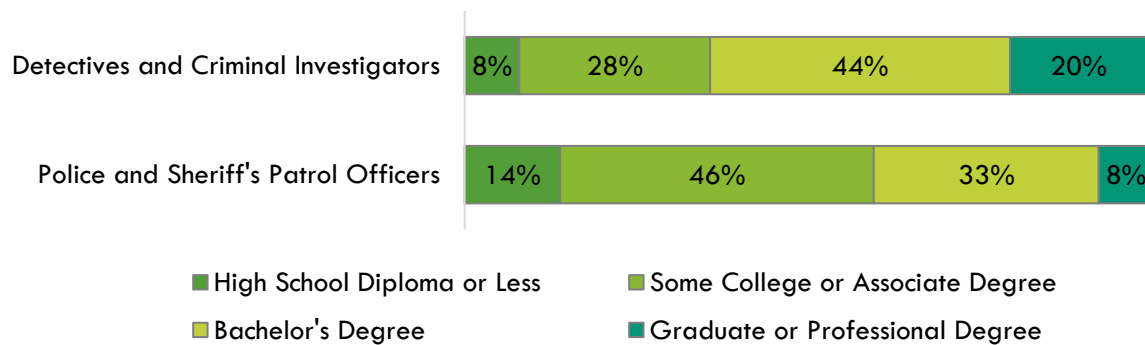
Top Specialized Skills	Top Common Skills	Top Software Skills
Law Enforcement (158)	Investigation (154)	Microsoft Excel (14)
Patrolling (52)	Communication (122)	Microsoft PowerPoint (12)
International Laws (51)	Operations (103)	Spreadsheets (9)
Rehabilitation (48)	Tactfulness (74)	Mobile Security (9)
Forensic Psychology (47)	English Language (62)	Microsoft Word (8)
Criminal Justice (43)	Physical Fitness (59)	Microsoft Access (7)
Crime Prevention (41)	Writing (59)	Operating Systems (7)
Motorcycles (41)	Management (56)	Microsoft Office (6)
All-Terrain Vehicles (40)	Good Driving Record (55)	Data Lakes (5)
Code Enforcement (39)	Problem Solving (53)	Calendaring Software (5)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for *Detectives and Criminal Investigators* and *Police and Sheriff's Patrol Officers*. National-level educational attainment data indicates that between 28% and 46% of workers have completed some college or an associate degree as their highest level of education, as shown in Exhibit 9.

Of the 396 online job postings, 59% (equivalent to 234 postings) of cumulative job postings for the occupations of interest listed a minimum education requirement in the SCV/SML subregion. Of the 234 postings, 53% requested a bachelor's degree and 38% requested a high school diploma or equivalent.

Exhibit 9: National-level Educational Attainment for Police Science-related Occupations



Educational Supply

Community College Supply:

Exhibits 10a and 10b show the annual and three-year average number of awards conferred by community colleges in the programs that have historically trained for either of the two occupations included in this report. The colleges with the most completions are Bakersfield (South), Sequoias (South), and Fresno City (South).

Exhibit 10a: NCV/NML Community College Awards (Certificates and Degrees) 2020-21 through 2022-23

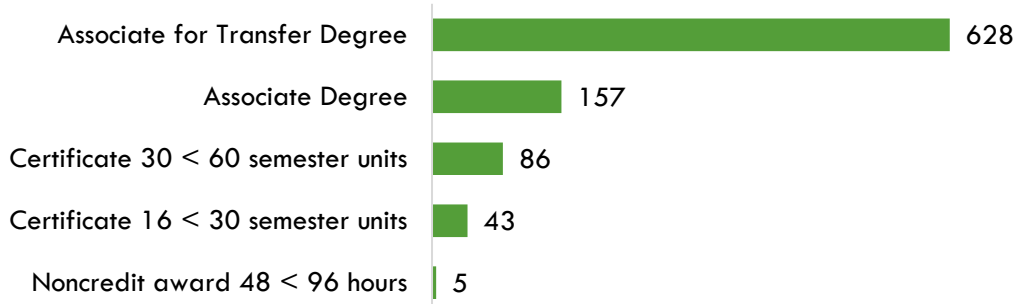
TOP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
2105.00	Administration of Justice	Merced	104	83	74	87
		Modesto	104	117	86	102
		San Joaquin Delta	115	100	99	105
		Subtotal/Average	323	300	259	294
2105.10	Corrections	San Joaquin Delta	7	5	12	8
		Subtotal/Average	7	5	12	8
2105.50	Police Academy	San Joaquin Delta	63	53	49	55
		Subtotal/Average	63	53	49	55
NCV/NML Supply Grand Total			393	358	320	357

Exhibit 10b: SCV/SML Community College Awards (Certificates and Degrees)
2020-21 through 2022-23

TOP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
2105.00	Administration of Justice	Bakersfield	218	234	172	208
		Cerro Coso	33	34	31	33
		Clovis	43	46	51	47
		Fresno City	151	152	129	144
		Madera	18	32	31	27
		Porterville	50	43	26	40
		Reedley	76	55	60	64
		Sequoias	123	116	85	108
		Taft	40	27	40	36
		Coalinga	25	28	18	24
		Lemoore	56	53	56	55
Subtotal/Average		833	820	699	784	
2105.10	Corrections	Bakersfield	1	3	2	2
		Clovis	1	1	-	1
		Fresno City	9	4	16	10
		Madera	-	4	2	2
		Reedley	14	11	11	12
		Sequoias	7	8	8	8
		Taft	-	-	1	0
		Coalinga	6	6	4	5
		Lemoore	19	11	13	14
Subtotal/Average		57	48	57	54	
2105.40	Forensics, Evidence, and Investigation	Fresno City	7	2	3	4
Subtotal/Average		7	2	3	4	
2105.50	Police Academy	Fresno City	2	13	21	12
		Sequoias	71	56	68	65
Subtotal/Average		73	69	89	77	
SCV/SML Supply Grand Total			970	939	848	919

Exhibit 11 shows the annual average community college awards by type from 2020-21 through 2022-23. Of the 919 awards conferred in the SCV/SML subregion, 68% of all awards were for an associate for transfer degree (628).

Exhibit 11: Annual Average SCV/SML Subregional Community College Awards by Type, 2020-21 through 2022-23



Non-Community College Supply:

For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for the two occupations studied in this report. Exhibits 12a and 12b show the annual and three-year average number of awards conferred by non-community college institutions in programs that have historically trained for the occupations of interest. Between 2019 and 2022, non-community colleges in the SCV/SML subregion conferred an average of 27 awards annually in related training programs.

Exhibit 12a: NCV/NML Subregional Non-Community College Awards, 2019-2022

CIP Code	Program	Institution	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
43.0107	Criminal Justice/Police Science	N/A	-	-	-	-
		Subtotal/Average	-	-	-	-
NCV/NML Supply Grand Total			-	-	-	-

Exhibit 12b: SCV/SML Subregional Non-Community College Awards, 2019-2022

CIP Code	Program	Institution	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
43.0107	Criminal Justice/Police Science	Institute of Technology	34	28	20	27
		Subtotal/Average	34	28	20	27
SCV/SML Supply Grand Total			34	28	20	27

Appendix A: Methodology

The CVML COE prepared this report by analyzing data from occupations and education programs.

Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies. Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Using a TOP-SOC crosswalk, the CVML COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

The CVML COE determined labor market supply for an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a "supply table" with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP code data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data), also known as IPEDS. TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Data included in this analysis represent the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the CVML COE. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study which can signal demand and show what employers are looking for in potential employees but is not a perfect measure of the quantity of open positions.

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; 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 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.

Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics and the American Community Survey. For more information, see https://lightcast.io/
Living Wage	The living wage is derived from the Insight Center's California Family Needs Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: https://selfsufficiencystandard.org/California/ Wage figures are used by the CCCCCO to calculate the percentage of students that attained the regional living wage.
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see https://www.bls.gov/emp/documentation/education/tech.htm
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations. For more information, see https://www.onetonline.org/help/online/
Educational Supply	The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	DataVista, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://datavista.cccco.edu/

Data Type	Source
Population and Occupation Demographics	The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. For more information, see: https://www.census.gov/programs-surveys/acs Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: https://usa.ipums.org/usa/about.shtml

For more information, please contact the Central Valley Mother Lode Center of Excellence:

Patricia Salinas, Interim 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

January 2025

