October 2022

Labor Market

Analysis

Police Science

POWERED BY

California Community Colleges

Prepared by the Central Valley/Mother Lode Center of Excellence

Table of Contents

If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version. To make a request, contact Nora Seronello by phone at (209) 575-6894 or by email seronellon@mjc.edu.

Summary

This analysis conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for Police Science. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations. This report also serves a secondary purpose, which is to aid in making a data-informed decision regarding the utility of a Police Science Bachelor's degree program offered at Bakersfield college.

It is important to note that Administration of Justice programs serve to prepare students for a variety of community college level occupations. These programs are also a conduit for transfer students intending to pursue higher-level occupations in the legal professions. Therefore the following four broad spectrum occupations related to Police Science were identified for Bakersfield College:

- 23-2000, Legal Support Workers
- 33-1000, Supervisors of Protective Service Workers
- 33-3000, Law Enforcement Workers
- 33-9000, Other Protective Service Workers

Key findings:
- **Occupational demand —** There were 27,371 workers employed in jobs related to Police Science in 2021 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. The largest occupation is other protective service workers with 10,269 workers, a projected growth rate of 5% over the next five years, and 1,839 annual openings.

- **Wages —** Supervisors of protective service workers earn the highest entry-level wage, $48.32/hour in the subregion.

- **Employers —** Employers with the most job postings in the subregion are Allied Universal, US Customs and Border Protection, and Securitas.

- **Occupational titles —** The most common occupational title in job postings in the subregion is Security Guards. The most common job title is Security Officer.

- **Skills and certifications —** The top baseline skill is communication skills, the top specialized skill is surveillance, and the top software skill is Microsoft Office. The most in-demand certification is a First Aid Cpr Aed.

- **Education —** There was no education data available for the broad-spectrum occupations Police Science occupations selected for this report. Therefore, education levels were taken from the four middle skill occupation were used to provide some educational attainment clarity. It is important to note that all of the following occupations require only a high school diploma or the equivalence, but completion of an academy is required to be a successful job candidate in the State of California (Exhibit 10). Hence, one-third to nearly one-half of current workers in these professions

have at least some college up to an associate degree. These findings are nearly matched for those workers having a Bachelor's degree or more.

- **Supply —** Analysis of postsecondary completions shows that on average 1,483 awards were conferred in the Central Valley/Mother Lode region each year.

Recommendation:

Based on a comparison of occupational demand and supply, there is an undersupply of 2,294 trained workers in the subregion and 4,028 workers in the region. The Center of Excellence recommends that Bakersfield College work with the regional directors, the college's advisory board, and local industry in the expansion of programs to address the shortage of Police Science workers in the region.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Bakersfield College to provide labor market information for Police Science. The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use. The average living wage for a single adult in the SCV/SML subregion is $11.91/hour.[1] Analysis of the program and occupational data related to Police Science resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 23-2000, Legal Support Workers
- 33-1000, Supervisors of Protective Service Workers
- 33-3000, Law Enforcement Workers
- 33-9000, Other Protective Service Workers

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown below. There was no O*Net data available for legal support workers, supervisors of protective service workers, law enforcement workers, and other protective service workers

Occupational Demand

The SCV/SML subregion employed 2,7371 workers in Police Science occupations in 2021 (Exhibit 1). The largest occupation is other protective service workers with 10,269 workers in 2021. This occupation is projected to grow by 5% over the next five years and has the greatest number of projected annual openings, 1,839.

---

[1] 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://insightcced.org/tools-metrics/self-sufficiency-standard-tool-for-california/.

Exhibit 1. Police Science employment and occupational projections in the SCV/SML subregion

| Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
Other Protective Service Workers	10,269	10,739	470	5%	1,839
Law Enforcement Workers	13,069	13,205	136	1%	1,176
Supervisors of Protective Service Workers	2,352	2,437	84	4%	199
Legal Support Workers	1,680	1,733	54	3%	189
TOTAL	**27,371**	**28,114**	**743**	**3%**	**3,402**

Wages

Exhibit 2a shows the hourly wages of the Police Science occupations. Supervisors of protective service workers earn the highest entry-level wage, $48.32/hour in the subregion[2].The average living wage for a single adult in the SCV/SML subregion is $11.91.[3] Please note 10th and 25th percentiles are considered entry-level wages while 75th and 90th are considered experienced wages, either by gained by long term employment, received extra training, etc.

Exhibit 2a. Police Science hourly wages in the SCV/SML subregion

Occupation	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings
Supervisors of Protective Service Workers	$37.16	$48.32	$55.64
Law Enforcement Workers	$33.25	$40.92	$46.00
Legal Support Workers	$21.29	$24.12	$33.04
Other Protective Service Workers	$14.36	$15.73	$20.72

Exhibit 2b shows the average hourly wages for Police Science occupations, the average entry-level wage exceeds the average living wage for the South Central Valley/Southern Mother Lode SCV/SML subregion.

Exhibit 2b. police science average hourly wages in the SCV/SML subregion

---
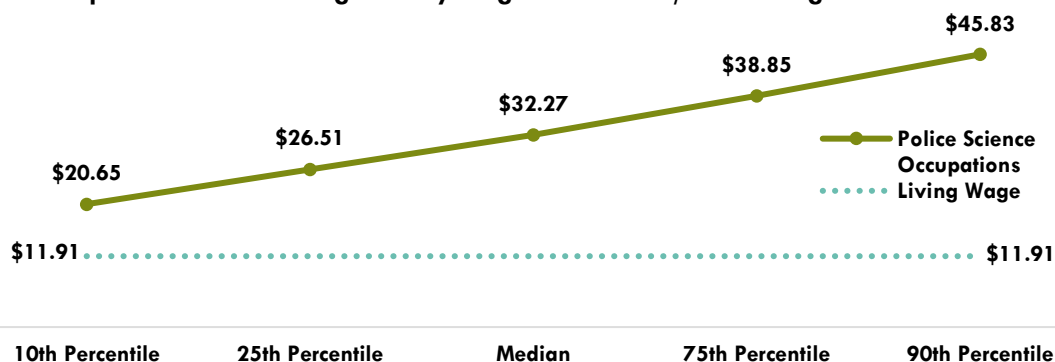
[2] Entry-level wages are derived from the 25th percentile.

[3] 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://insightcced.org/tools-metrics/self-sufficiency-standard-tool-for-california/.

Job Postings

There were 2,122 job postings for the four occupations in the SCV/SML subregion from April 2022 to September 2022.[4] The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of Police Science by number of job postings

Employer	Job Postings	% Job Postings
Allied Universal	154	9%
US Customs and Border Protection	123	7%
Securitas	92	5%
Gardaworld	63	4%
The Home Depot Incorporated	30	2%
state of california	30	2%
American Guard Services	19	1%
Ross Stores	19	1%
American Guard Services Incorporated	17	1%
County Tulare	17	1%

Exhibit 4 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across 10 O*NET OnLine occupations. The occupational title Security Guards is listed in 980 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include Security Officer in 168 job postings, Security Guard in 105 job postings, and Border Patrol Agent in 50 job postings.

Exhibit 4. Top occupational titles in job postings for Police Science

Occupational Title	Job Postings	% of Job Postings
Security Guards	980	46%
Paralegals and Legal Assistants	267	13%
Retail Loss Prevention Specialists	173	8%
Immigration and Customs Inspectors	130	6%
Police Patrol Officers	110	5%
Correctional Officers and Jailers	104	5%
Private Detectives and Investigators	88	4%
Legal Support Workers, All Other	46	2%
Sheriffs and Deputy Sheriffs	32	2%
Criminal Investigators and Special Agents	26	1%

Salaries

Exhibit 5 shows the "Market Salaries" for Police Science occupations. These are calculated by Burning Glass using a machine learning model built off of millions of job postings every year. This accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

---

[4] Other than occupation titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

Exhibit 5. Salaries for Police Science occupations

Market Salary Percentile	Salary Amount
10th Percentile	$25,045
25th Percentile	$27,291
50th Percentile	$32,746
75th Percentile	$45,692
90th Percentile	$59,721

Education

Of the 2,122 job postings, 1,253 listed an education level preferred for the positions being filled. Among those, 77% requested high school or vocational training, 23% requested a bachelor's degree, and 11% requested an associate degree (Exhibit 6). A job posting can indicate more than one education level. Hence, the percentages shown in the chart below may total more than 100%.
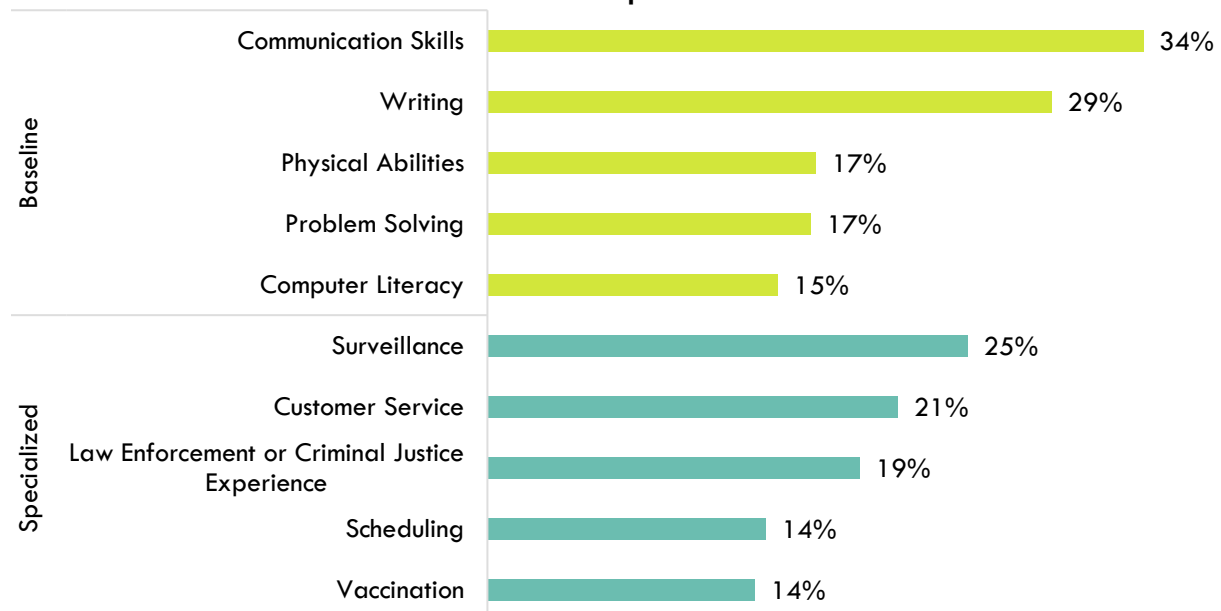
Exhibit 6. Education levels requested in job postings for Police Science

Education Level	Job Postings	% of Job Postings
High school or vocational training	970	77%
Bachelor's degree	288	23%
Associate's degree	133	11%
Master's degree	100	8%
Doctoral degree	83	7%

Baseline and Specialized Skills

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are communication skills, 34% of job postings, writing, 29%, and physical abilities, 17%. The top three specialized skills are surveillance, 25% of job postings, customer service, 21%, and law enforcement or criminal justice experience, 19%.

Exhibit 7. In-demand Police Science baseline and specialized skills

Baseline
- Communication Skills: 34%
- Writing: 29%
- Physical Abilities: 17%
- Problem Solving: 17%
- Computer Literacy: 15%

Specialized
- Surveillance: 25%
- Customer Service: 21%
- Law Enforcement or Criminal Justice Experience: 19%
- Scheduling: 14%
- Vaccination: 14%

Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Office and Excel were the top two software skills identified in job postings (Exhibit 8).

Exhibit 8. In-demand Police Science software skills
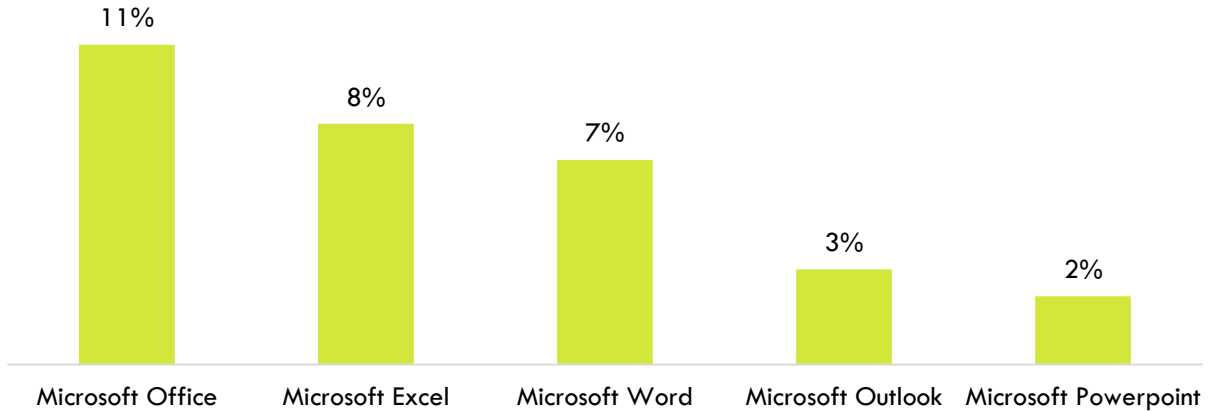
Certifications

Of the 2,122 job postings, 1,050 contained certification data. Among those, 53% indicated a need for a First Aid Cpr Aed. The next top certifications are a paralegal certification and security clearance (Exhibit 9). Please note 78% of job postings indicated a need for a driver's license, but it is not a certification.

Exhibit 9. Top Police Science certifications requested in job postings

Education, Work Experience & Training

There was no education data available for the broad-spectrum occupations selected for this report. Therefore, education levels were taken from the four middle skill occupation: police and sheriff's patrol officers, detectives and criminal investigators, first-line supervisors of police and detectives, and transit and railroad police to provide some educational attainment clarity for some Police Science specific occupations. It is important to note that all of the following occupations require only a high school diploma or the equivalence, but completion of an academy is required to be a successful job candidate in the State of California (Exhibit 10). Hence, one-third to nearly one-half of current workers in these professions have at least some college up to an associate degree. These findings are nearly matched for those workers having a Bachelor's degree or more.

Exhibit 10. Education, work experience, training, and Current Population Survey results for Police Science middle skill occupations[5]

Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training	CPS: Some College to an AA degree	CPS: Bachelor's degree+
Police and Sheriff's Patrol Officers	High school diploma or equivalent	None	Moderate-term	46.4%	33.0%
Detectives and Criminal Investigators	High school diploma or equivalent	Less than 5 years	Moderate-term	32.0%	41.8%
First-Line Supervisors of Police and Detectives	High school diploma or equivalent	Less than 5 years	Moderate-term	41.0%	31.1%
Transit and Railroad Police	High school diploma or equivalent	None	Moderate-term	46.4%	33.0%

---

[5] "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, https://www.bls.gov/cps/.

Supply

Analysis of program data from the Integrated Postsecondary Education Data System (IPEDS) included the TOP and CIP codes and titles: 210500 - Administration of Justice, 43.0103 - Criminal Justice/Law Enforcement Administration, 43.0104 - Criminal Justice/Safety Studies, and 43.0107 - Criminal Justice/Police Science. Analysis of the last three years of data shows that, on average, 1,483 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

Exhibit 11. Postsecondary supply for Police Science occupations in the region

TOP/ CIP Code- Title	College	Associate Degree	Associate for Transfer Degree	Bachelor's Degree	Certificate 16 < 30 Semester Units	Certificate 18 < 30 Semester Units	Certificate 30 < 60 Semester Units	Certificate 6 < 18 Semester Units	Certificate 60+ Semester Units	Subtotal
210500 - Administration of Justice	Bakersfield	54	116							170
	Cerro Coso		14							14
	Clovis	1	34		0	1				37
	Fresno City	13	133		2	1	23			173
	Merced	24	78				3			104
	Modesto	25	75					0		101
	Porterville	1	46				12			58
	Reedley College	6	66		10	19				101
	San Joaquin Delta	34	59				2		7	101
	Sequoias	11	86							97
	Taft	19	22							41
	West Hills Coalinga	2	19							21
	West Hills Lemoore	23	43							67
43.0103 - Criminal Justice/Law Enforcement Administration	Fresno Pacific University			11						11
	Humphreys University-Stockton and Modesto Campuses	10		13						23
43.0104 - Criminal Justice/Safety Studies	California State University-Bakersfield			134						134
	California State University-Stanislaus			185						185
	Fresno Pacific University			0						0
43.0107 - Criminal Justice/Police Science	Fresno Pacific University			0						0
	Institute of Technology	44								44
TOTAL		**268**	**792**	**343**	**13**	**22**	**39**	**0**	**7**	**1,483**

There is an undersupply of 2,294 Police Science workers in the SCV/SML subregion and 4,028 workers in the region (Exhibit 12).

Exhibit 12. Police Science workforce demand (annual job openings), postsecondary supply of students (awards), and additional students needed to fill gap in the SCV/SML subregion and region

Region	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap
SCV/SML	3,402	1,109	1,109
CVML	5,511	4,028	1,483

Student Outcomes

Exhibit 13 summarizes employment and wage outcomes from the California Community College Chancellor's Cal-PASS Plus LaunchBoard for the TOP code related to Police Science. Of note, 764 administration of justice students received a degree or certificate or attained apprenticeship journey status; 586 students transferred; 52% of students obtained a job closely related to their field of study; 36% had a median change in earnings; and 64% of students attained a living wage.

Exhibit 13. Regional metrics for the TOP code related to Police Science

Metric	Administration of Justice 210500
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	764
Number of Students Who Transferred	586
Job Closely Related to Field of Study	52%
Median Change in Earnings	36%
Attained a Living Wage	64%
* denotes data not available.	

Conclusion

The entry-level wages of the four occupations exceed the SCV/SML subregion's average living wage. There were 2,122 job postings in the past six months for occupations related to Police Science in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is communication skills, and the top specialized skill is surveillance.
- The top software skill is Microsoft Office.
- The top certification is a First Aid Cpr Aed.

There is an undersupply of trained workers, a shortage of 2,294 in the SCV/SML subregion and 4,028 in the region.

Recommendation

Based on a comparison of occupational demand and supply, there is an undersupply of 2,294 trained workers in the subregion and 4,028 workers in the region. The Center of Excellence recommends that Bakersfield College work with the regional directors, the college's advisory board, and local industry in the expansion of programs to address the shortage of Police Science workers in the region.

Appendix A: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., 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	Economic Modeling Specialists, Intl. (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 also affected by county-level Lightcast earnings by industry: economicmodeling.com.
Typical Education Level and On-the-job Training	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 BLS publishes projections data: https://www.bls.gov/emp/tables/educational-attainment.htm.
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: labormarketinfo.edd.ca.gov.
Job Posting and Skills Data	Burning Glass: burning-glass.com/.
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.

Key Terms and Concepts

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

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (Lightcast) formula that includes 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.

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, 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.