

March 2020

# Labor Market Analysis

## Administration of Justice and Criminology - Law Enforcement



California  
Community  
Colleges



Prepared by the Central Valley/Mother Lode Center of Excellence

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# Summary

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for administration of justice and criminology - law enforcement (criminology). Seven occupations related to administration of justice (ADJ) and criminology were identified for Madera Community College Center:

- 33-3012 Correctional Officers and Jailers
- 33-3051 Police and Sheriff's Patrol Officers
- 33-9021 Private Detectives and Investigators
- 33-1011 First-Line Supervisors of Correctional Officers
- 33-3021 Detectives and Criminal Investigators
- 33-1012 First-Line Supervisors of Police and Detectives
- 33-3011 Bailiffs

## Key findings:

- **Occupational demand** — Nearly 16,600 workers were employed in jobs related to ADJ and criminology in 2018 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. The largest occupation is correctional officers and jailers with 9,177 workers in 2018, a projected growth rate of 3% over the next five years, and 4,338 annual openings.
- **Wages** — On average, first-line supervisors of police and detectives have the highest entry-level earnings, \$46.23/hour in the subregion and \$47.18/hour in the region.
- **Employers** — Employers with the most job postings in the subregion are the city of Fresno, Kern County, and the U.S. Army.
- **Job titles** — The most common occupational title in job postings in the subregion is police patrol officers. The most common job title is police officers.
- **Skills and certifications** — The top baseline skill is writing, the top specialized skill is prevention of criminal activity, and the top software skill is public administration. The most in-demand certification is a driver's license.
- **Education** — All seven occupations typically require a high school diploma or equivalent along with moderate-term on-the-job training. The exception is first-line supervisors of correctional officers for which no on-the-job training is required.
- **Supply** — Analysis of postsecondary completions in the region shows that on average 1,255 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 712 trained workers in the subregion and 918 workers in the region. The Center of Excellence recommends that Madera Community College Center work with the college's advisory board, and local industry in the expansion of programs to address the shortage of ADJ and criminology workers in the region.

# Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Madera Community College Center to provide labor market information for ADJ and criminology. Review of the Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP) found the following programs are appropriate for this analysis:

- Administration of Justice-210500
- Corrections-210510
- Police Academy-210550

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 South Central Valley/Southern Mother Lode (SCV/SML) subregion is \$10.30/hour.<sup>1</sup> Analysis of the program and occupational data related to ADJ and criminology resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 33-3012 Correctional Officers and Jailers
- 33-3051 Police and Sheriff's Patrol Officers
- 33-9021 Private Detectives and Investigators
- 33-1011 First-Line Supervisors of Correctional Officers
- 33-3021 Detectives and Criminal Investigators
- 33-1012 First-Line Supervisors of Police and Detectives
- 33-3011 Bailiffs

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. O\*NET data was not available for: Police and Sheriff's Patrol Officers; and Detectives and Criminal Investigators.

## **Correctional Officers and Jailers**

**Job Description:** Guard inmates in penal or rehabilitative institutions in accordance with established regulations and procedures. May guard prisoners in transit between jail, courtroom, prison, or other point. Includes deputy sheriffs and police who spend the majority of their time guarding prisoners in correctional institutions.

**Sample Job Titles:** Correctional Officer, Correctional Sergeant, Corrections Officer (CO), Custody Assistant, Deputy Jailer, Detention Deputy, Detention Officer, Jail Officer, Jailer, Jailor

**Knowledge:** Public Safety and Security, Law and Government, English Language, Clerical, Administration and Management

**Skills:** Social Perceptiveness, Speaking, Active Listening, Monitoring, Critical Thinking

## **Private Detectives and Investigators**

**Job Description:** Gather, analyze, compile and report information regarding individuals or organizations to clients, or detect occurrences of unlawful acts or infractions of rules in private establishment.

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<sup>1</sup> 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/>.

**Sample Job Titles:** Asset Protection Detective, Field Investigator, Investigator, Loss Prevention Agent, Loss Prevention Associate, Loss Prevention Detective, Loss Prevention Investigator, Loss Prevention Officer, Private Investigator, Special Investigator

**Knowledge:** English Language, Customer and Personal Service, Law and Government, Clerical, Computers and Electronics

**Skills:** Active Listening, Speaking, Critical Thinking, Reading Comprehension, Complex Problem Solving

#### **First-Line Supervisors of Correctional Officers**

**Job Description:** Directly supervise and coordinate activities of correctional officers and jailers.

**Sample Job Titles:** Captain, Correctional Lieutenant, Correctional Officer Captain, Correctional Officer Lieutenant, Correctional Officer Sergeant, Correctional Sergeant, Corrections Sergeant, Lieutenant, Sergeant, Shift Supervisor

**Knowledge:** Public Safety and Security, English Language, Law and Government, Administration and Management, Psychology

**Skills:** Active Listening, Coordination, Critical Thinking, Monitoring, Social Perceptiveness

#### **First-Line Supervisors of Police and Detectives**

**Job Description:** Directly supervise and coordinate activities of members of police force.

**Sample Job Titles:** Chief of Police, Detective Sergeant, Lieutenant, Patrol Sergeant, Police Captain, Police Chief, Police Lieutenant, Police Sergeant, Sergeant, Shift Supervisor

**Knowledge:** Law and Government, Public Safety and Security, Administration and Management, English Language, Psychology

**Skills:** Active Listening, Coordination, Critical Thinking, Management of Personnel Resources, Monitoring

#### **Bailiffs**

**Job Description:** Maintain order in courts of law.

**Sample Job Titles:** Bailiff, Court Bailiff, Court Officer, Court Security Officer, Deputy Bailiff, Deputy Sheriff Court Services, Security Officer

**Knowledge:** Public Safety and Security, Law and Government, Customer and Personal Service, English Language

**Skills:** Social Perceptiveness, Active Listening, Monitoring, Speaking, Judgment and Decision Making

## Occupational Demand

The South Central Valley/Southern Mother Lode subregion employed 16,582 workers in ADJ and criminology occupations in 2018 (Exhibit 1). The largest occupation is correctional officers and jailers with 9,177 workers in 2018. This occupation is projected to grow by 3% over the next five years and has the greatest number of projected annual openings, 4,338.

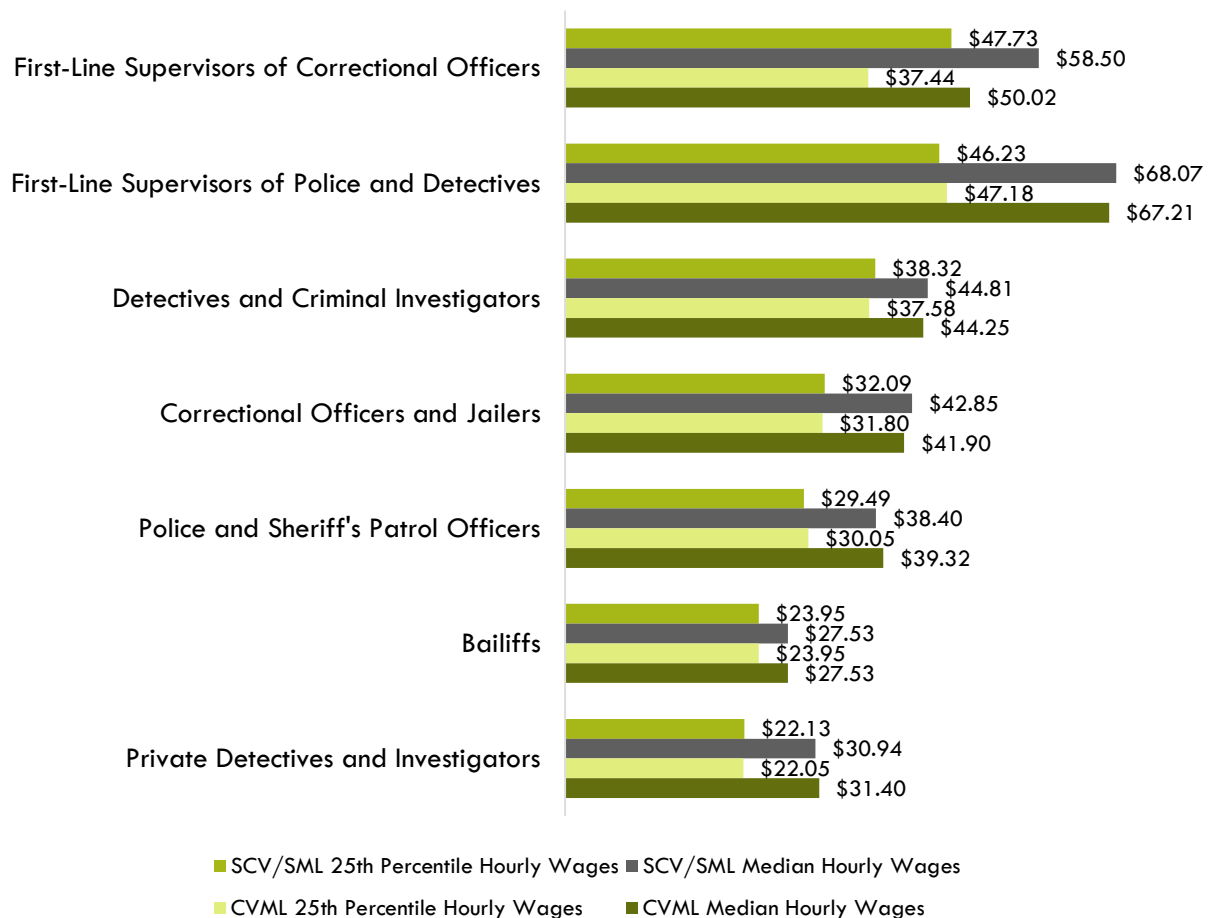
**Exhibit 1. ADJ and criminology employment and occupational projections in the SCV/SML subregion**

Occupation	2018 Jobs	2023 Jobs	5-year Change	5-year % Change	Annual Openings
Correctional Officers and Jailers	9,177	9,418	241	3%	4,338
Police and Sheriff's Patrol Officers	4,629	4,887	258	6%	1,931
Private Detectives and Investigators	871	882	11	1%	420
First-Line Supervisors of Correctional Officers	865	885	20	2%	334
Detectives and Criminal Investigators	531	572	41	8%	218
First-Line Supervisors of Police and Detectives	402	441	39	10%	169
Bailiffs	105	111	6	6%	52
<b>Total</b>	<b>16,582</b>	<b>17,198</b>	<b>616</b>	<b>4%</b>	<b>7,463</b>

## Wages

Exhibit 2 compares the entry-level and experienced wages of the ADJ and criminology occupations. On average, first-line supervisors of police and detectives have the highest entry-level earnings, \$46.23/hour in the subregion and \$47.18/hour in the region.

**Exhibit 2. Entry-level and experienced wage comparison in the SCV/SML subregion and region**



# Job Postings

There were 196 job postings for the seven occupations in the SCV/SML subregion from September 2019 to February 2020. The employers with the most job postings are listed in Exhibit 3.

**Exhibit 3. Top employers for ADJ and criminology by number of job postings**

Employer	Job Postings
City Fresno	12
Kern County	10
US Army	10
Army National Guard	9
County Kern	8
US Government	6
Umpqua Community College	6
Kern Community College District	5
State Center Community College District	5
Cerro Coso Community College	4

Job posting analysis also included the top industries hiring positions related to ADJ and criminology (Exhibit 4).

**Exhibit 4. Top industries for ADJ and criminology by number of job postings**

Industry	Job Postings
Executive, Legislative, and Other General Government Support	36
Justice, Public Order, and Safety Activities	34
National Security and International Affairs	32
Junior Colleges	22
Colleges, Universities, and Professional Schools	9
Psychiatric and Substance Abuse Hospitals	5
Support Activities for Air Transportation	4
Administration of Environmental Quality Programs	3
Elementary and Secondary Schools	2
Agencies, Brokerages, and Other Insurance Related Activities	1

## Job Titles

Exhibit 5 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across nine O\*NET OnLine occupations. The occupational title police patrol officers is listed in the most job postings, 109, followed by sheriffs and deputy sheriffs, 29 job postings. Note that job postings are heavily dominated by the occupational title police patrol officers.

**Exhibit 5. Top occupational titles in job postings for ADJ and criminology**

Occupational Title	Job Postings
Police Patrol Officers	109
Sheriffs and Deputy Sheriffs	29
First-Line Supervisors of Police and Detectives	23
Criminal Investigators and Special Agents	14
Gaming Surveillance Officers and Gaming Investigators	6
Immigration and Customs Inspectors	6
Intelligence Analysts	5
Bailiffs	3
Police Identification and Records Officers	1

Analysis of the 196 advertised job titles for the targeted occupations reveals the top title is police officer, occurring in 48 job postings, followed by public safety officer, 22 job postings (Exhibit 6).

**Exhibit 6. Top job titles by number of job postings for ADJ and criminology**

Job Title	Job Postings
Police Officer	48
Public Safety Officer	22
Deputy Sheriff	11
Military Police Officer	10
Criminal Investigator	9
Deputy Trainee Sheriff	6
Police	6
Chief of Police	5
Military Police	5
Intelligence Specialist	4
Police Officer	48

**Salaries**

Exhibit 7 shows the “Market Salaries” for ADJ and criminology occupations that are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

**Exhibit 7. Salaries for ADJ and criminology**

Market Salary Percentile	Salary Amount
10th Percentile	33,841
25th Percentile	41,394
50th Percentile	51,519
75th Percentile	61,924
90th Percentile	91,099



## Education

Of the 196 job postings, 123 listed an education level preferred for the positions being filled. Of those, 100 requested a high school diploma or vocational training, five requested an associate degree, and 25 requested a bachelor's degree (Exhibit 8).

**Exhibit 8. Education levels requested in job postings for ADJ and criminology**

Education level	% of Job Postings
High school or vocational training	100
Bachelor's degree	25
Master's degree	13
Doctoral degree	7
Associate degree	5

## Baseline and Specialized Skills

Exhibit 9 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are writing, 41% of job postings, building effective relationships, 29%, and physical abilities, 28%. The top three specialized skills are prevention of criminal activity, 43% of job postings, crowd control, 31%, and public health and safety, 29%.

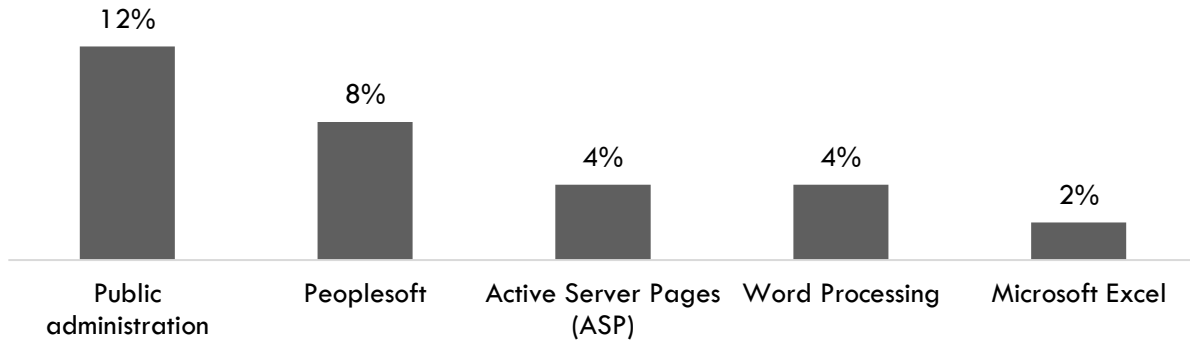
**Exhibit 9. In-demand ADJ and criminology baseline and specialized skills**



### Software Skills

Analysis also included the software skills most in demand by employers. Public administration and Peoplesoft rank first and second (Exhibit 10).

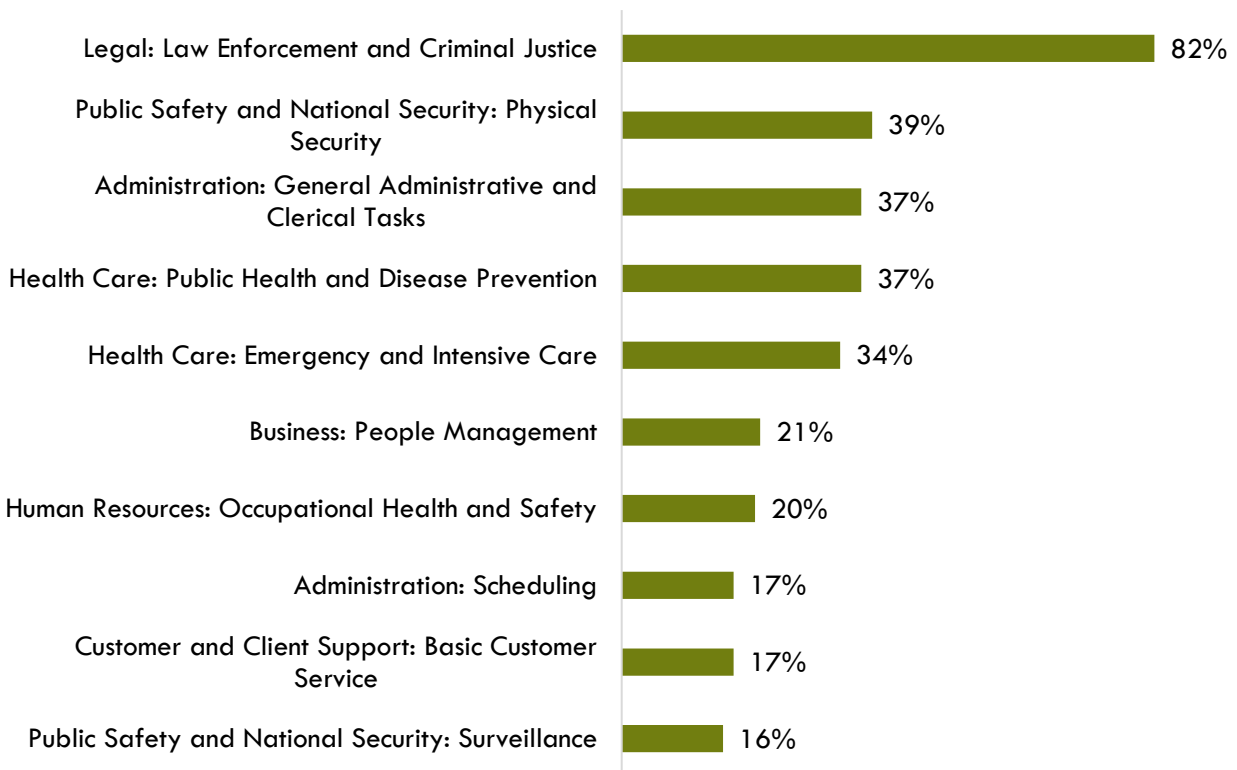
**Exhibit 10. In-demand ADJ and criminology software skills**



### Skill Cluster Projections

Of the 196 job postings, 51 postings contained skill projections. An evaluation of the skill clusters that will have the greatest gains in level of importance shows that the top areas are Legal: Law Enforcement and Criminal Justice, 82%; Public Safety and National Security: Physical Security, 39%; and Administration: General Administrative and Clerical Tasks, 37%. (Exhibit 11).

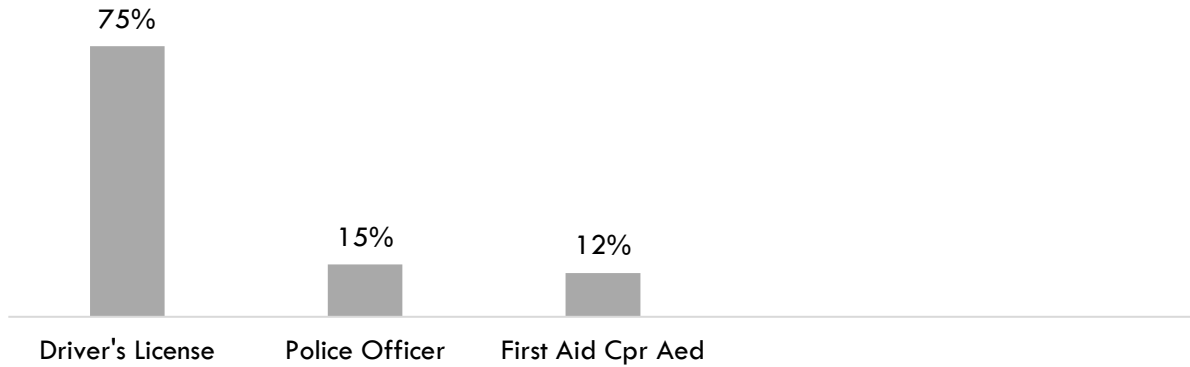
**Exhibit 11. Skill cluster projections for ADJ and criminology**



### Certifications

Of the 196 job postings, 124 contained certification data. Of those, 75% indicated a need for a driver's license. The next top certifications are police officer and First Aid/CPR/AED (Exhibit 12).

**Exhibit 12. Top ADJ and criminology certifications requested in job postings**



## Education, Work Experience & Training

All seven occupations typically require a high school diploma or equivalent along with moderate-term on-the-job training (Exhibit 13). The exception is first-line supervisors of correctional officers for which no on-the-job training is required. These are all considered community college relevant occupations because California state law requires that workers in the listed occupations complete an academy and pass a certification exam prior to being hired to work in the public sector.

**Exhibit 13. Education, work experience, training and Current Population Survey results for ADJ and criminology occupations<sup>2</sup>**

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
First-Line Supervisors of Correctional Officers	High school diploma or equivalent	Less than 5 years	None	46.0%
First-Line Supervisors of Police and Detectives	High school diploma or equivalent	Less than 5 years	Moderate term	46.1%
Bailiffs	High school diploma or equivalent	None	Moderate term	49.8%
Correctional Officers and Jailers	High school diploma or equivalent	None	Moderate term	49.8%
Detectives and Criminal Investigators	High school diploma or equivalent	Less than 5 years	Moderate term	34.8%
Police and Sheriff's Patrol Officers	High school diploma or equivalent	None	Moderate term	47.0%
Private Detectives and Investigators	High school diploma or equivalent	Less than 5 years	Moderate term	32.5%

<sup>2</sup> "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

# Supply

Analysis of program data from the California Community Colleges Chancellor's Office Data Mart included the TOP codes: Administration of Justice-210500, Corrections-210510, and Police Academy-210550.

Analysis of the last three years of TOP code data shows that, on average, 1,255 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 14).

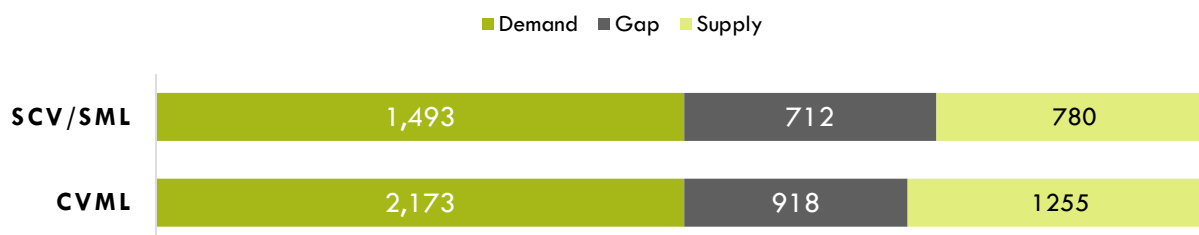
**Exhibit 14. Postsecondary supply for ADJ and criminology occupations in the region**

TOP or CIP Title-Code	College	Certificates	Degrees	Subtotal
<b>Administration of Justice-210500</b>	Bakersfield		90	90
	Cerro Coso	0	9	10
	Clovis Community	2	28	30
	Fresno City	14	123	137
	Merced	1	81	82
	Modesto Junior	0	77	77
	Porterville	17	41	58
	Reedley College	16	60	76
	San Joaquin Delta	12	82	94
	Sequoias		78	78
	Taft		42	42
	West Hills Coalinga		21	21
	West Hills Lemoore		49	49
<b>Corrections-210510</b>	Bakersfield		1	1
	Fresno City	2	1	3
	Merced	0	2	2
	Reedley College	7	3	10
	San Joaquin Delta	5	5	11
	Sequoias		6	6
	West Hills Coalinga		5	5
	West Hills Lemoore	2	8	10
<b>Police Academy-210550</b>	Fresno City	56		56
	San Joaquin Delta	204	5	209
	Sequoias	100		100
<b>Total</b>		<b>439</b>	<b>816</b>	<b>1,255</b>

## Gap Analysis

There is an undersupply of 712 ADJ and criminology workers in the SCV/SML subregion and 918 workers in the region (Exhibit 15).

**Exhibit 15. ADJ and criminology workforce annual demand and supply in the SCV/SML subregion and region**



## Student Outcomes

Exhibit 16 summarizes employment and wage outcomes from the California Community College Chancellor’s Cal-PASS Plus LaunchBoard for the TOP codes related to ADJ and criminology. Across the region, 848 administration of justice students received a degree/certificate and 413 transferred. Of the police academy students who completed a program, 30% reported a median change in earnings, and 89% attained a living wage.

**Exhibit 16. Regional metrics for the TOP code related to ADJ and criminology**

Metric	Administration of Justice 210500	Corrections 210510	Police Academy 210550
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	848	43	210
Number of Students Who Transferred	413	41	56
Job Closely Related to Field of Study	56%	67%	70%
Median Change in Earnings	35%	35%	30%
Attained a Living Wage	52%	73%	89%
* denotes data not available.			

## Conclusion

The entry-level wages of the seven occupations exceed the SCV/SML subregion’s average living wage. There were 196 job postings in the past six months for occupations related to ADJ and criminology in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is writing, and the top specialized skill is prevention of criminal activity.
- The top software skill is public administration.
- The top certification is a driver’s license.

There is an undersupply of trained workers, a shortage of 712 in the SCV/SML subregion and 918 in the region.

## Recommendation

Based on these findings, it is recommended that Madera Community College Center work with the college’s advisory board, and local industry in the expansion of programs to address the shortage of ADJ and criminology 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. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI 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 EMSI earnings by industry: <a href="http://economicmodeling.com">economicmodeling.com</a> .
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: <a href="https://www.bls.gov/emp/tables/educational-attainment.htm">https://www.bls.gov/emp/tables/educational-attainment.htm</a> .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: <a href="http://labormarketinfo.edd.ca.gov">labormarketinfo.edd.ca.gov</a> .
Job Posting and Skills Data	Burning Glass: <a href="http://burning-glass.com/">burning-glass.com/</a> .
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: <a href="http://onetonline.org">onetonline.org</a> .

## 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. (EMSI) 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.