**** **Crime Scene Investigation Occupations**

**Labor Market Information Report**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

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# Recommendation

Based on all available data, there appears to be an undersupply of Crime Scene Investigation workers compared to the demand for this cluster of occupations in the Bay region and in the Mid-Peninsula sub-region (San Francisco and San Mateo Counties). The annual gap is about 137 students annually in the Bay region and 34 in the Mid-Peninsula sub-region.

This report also provides student outcomes data on employment and earnings for programs on TOP 2105.40 - Forensics, Evidence, and Investigation in the state and region. It is recommended that this data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at City College of San Francisco and in the region.

# Introduction

This report profiles Crime Scene Investigation Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for a proposed new program at City College of San Francisco.

|  |
| --- |
| * **Detectives and Criminal Investigators (SOC 33-3021):** Conduct investigations related to suspected violations of Federal, State, or local laws to prevent or solve crimes. Excludes "Private Detectives and Investigators" (33-9021). |
| *Entry-Level Educational Requirement: High school diploma or equivalent* |
| *Training Requirement: Moderate-term on-the-job training* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 37%* |
|  |
| * **Forensic Science Technicians (SOC 19-4092):** Collect, identify, classify, and analyze physical evidence related to criminal investigations. Perform tests on weapons or substances, such as fiber, hair, and tissue to determine significance to investigation. May testify as expert witnesses on evidence or crime laboratory techniques. May serve as specialists in area of expertise, such as ballistics, fingerprinting, handwriting, or biochemistry. |
| *Entry-Level Educational Requirement: Bachelor's degree* |
| *Training Requirement: Moderate-term on-the-job training* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 35%* |

# Occupational Demand

**Table 1. Employment Outlook for Crime Scene Investigation Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Detectives and Criminal Investigators | 1,164 | 1,215 | 51 | 4% | 420 | 84 | $34.01 | $54.20 |
| Forensic Science Technicians | 414 | 474 | 60 | 14% | 313 | 63 | $23.30 | $36.25 |
| **Total** | **1,578** | **1,689** | **111** | **7%** | **732** | **147** | **$31.20** | **$49.49** |

*Source: EMSI 2018.2*

**Bay Region** includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Crime Scene Investigation Occupations in Mid-Peninsula Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Detectives and Criminal Investigators | 403 | 411 | 8 | 2% | 134 | 27 | $36.03 | $60.51 |
| Forensic Science Technicians | 77 | 88 | 11 | 14% | 58 | 12 | $27.99 | $38.47 |
| **Total** | **480** | **499** | **19** | **4%** | **192** | **38** | **$34.74** | **$56.97** |

*Source: EMSI 2018.2*

**Mid-Peninsula Sub-Region** includes San Francisco and San Mateo Counties

### Job Postings in Bay Region and Mid-Peninsula Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Sept 2017 - Aug 2018)**

|  |  |  |
| --- | --- | --- |
| Occupation | Bay Region | Mid-Peninsula |
| Forensic Science Technicians (19-4092.00) | 20 | 3 |
| Police Identification and Records Officers (33-3021.02) | 7 | 1 |
| **Total** | **27** | **4** |

*Source: Burning Glass*

**Table 4. Top Job Titles for Crime Scene Investigation Occupations for latest 12 months (Sept 2017 - Aug 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | Mid-Peninsula | Common Title | Bay | Mid-Peninsula |
| Examiner | 6 |  | Certified Examiner | 1 | 1 |
| Specialist | 4 |  | EE Technician | 1 |  |
| Police | 3 |  | Firearms Specialist | 1 |  |
| Technician | 3 |  | Forensic Specialist | 1 | 1 |
| Biometric Fingerprinting Technician | 2 |  | Science - Physics/Forensics | 1 |  |
| Metric Stream Expert | 2 | 2 | Senior Technician | 1 |  |
| Ba - Data Forensics And Insider Risks | 1 |  |  |  |  |

*Source: Burning Glass*

*Source: EMSI 2018.3*

# Industry Concentration

**Table 5. Industries hiring Crime Scene Investigation Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Industry – 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2017)** | **Jobs in Industry (2022)** | **% Change (2017-22)** | **% in Industry (2017)** |
| Local Government, Excluding Education and Hospitals (903999) | 814 | 897 | 10% | 53.6% |
| State Government, Excluding Education and Hospitals (902999) | 286 | 299 | 5% | 18.8% |
| Federal Government, Civilian, Excluding Postal Service (901199) | 267 | 276 | 3% | 17.5% |
| Federal Government, Military (901200) | 67 | 67 | 0% | 4.4% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715) | 13 | 12 | (8%) | 0.9% |
| Medical Laboratories (621511) | 12 | 16 | 33% | 0.8% |

**Table 6. Top Employers Posting Crime Scene Investigation Occupations in Bay and Mid-Peninsula Sub-Region (Sept 2017 - Aug 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Mid-Peninsula |
| City Fremont | 5 | Metafore Consulting Services | 1 | Fiveby | 1 |
| County Santa Clara | 5 | Pajaro Valley Unified School District | 1 | Metafore Consulting Services | 1 |
| PAE Incorporated | 4 | Potomac Management | 1 | Potomac Management | 1 |
| University Of California | 2 | Softpath Technologies Llc | 1 | Softpath Technologies LLC | 1 |
| Bass Pro Shops | 1 | Solutions Drive, LLC | 1 |  |  |
| Drug Enforcement Administration | 1 | Techpeople Us, Inc | 1 |  |  |
| Fiveby | 1 | US Department of Justice | 1 |  |  |

*Source: Burning Glass*

# Educational Supply

There are three colleges in the Bay Region issuing 10 awards annually on average in the past three years on TOP 2105.40 - Forensics, Evidence, and Investigation. One college in the Mid-Peninsula region issued four awards annually. It is likely that courses in the Administrative Justice programs (TOP 2105.00) at all three colleges that are related to the Forensics, Evidence, and Investigation program have not been coded under TOP 2105.40, resulting in no headcount being recorded across the three colleges for TOP 2105.40. In the future, colleges could code the courses for the Forensics, Evidence, and Investigation program under TOP 2105.04 to address this.

**Table 7. Awards on 2105.40 - Forensics, Evidence, and Investigation in the Bay Area**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| College | Sub-Region | CIP Code | Headcount | Associates | Certificates | Total |
| **Diablo Valley** | East Bay | n/a | 0 |  | 5 | 5 |
| **San Francisco** | Mid-Peninsula | n/a | 0 |  | 4 | 4 |
| **Solano** | North Bay | n/a | 0 | 1 |  | 1 |
| **Total Bay Region** | |  |  | **1** | **9** | **10** |
| **Total Mid-Peninsula Sub-Region** | |  |  |  | **4** | **4** |

# *Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

# Gap Analysis

Based on the data included in this report, there appears to be a labor market gap in the Bay region with 147 annual openings for the Crime Scene Investigation occupational cluster and 10 annual awards for an annual undersupply of 137. In the Mid-Peninsula sub-region, there is also a gap with 38 annual openings and four annual awards for an annual undersupply of 34.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 2105.40 - Forensics, Evidence, and Investigation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | City College of San Francisco (All CTE Programs) | State (TOP 2105.40) | Bay  (TOP 2105.40) | Mid-Peninsula (TOP 2105.40) | City College of San Francisco (TOP 2105.40) |
| % Employed Four Quarters After Exit | 74% | 72% | 69% | 74% | n/a | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,310 | $10,794 | $11,173 | $9,452 | n/a | n/a |
| Median % Change in Earnings | 46% | 46% | 77% | 184% | n/a | n/a |
| % of Students Earning a Living Wage | 63% | 55% | 55% | n/a | n/a | n/a |

*Source: Launchboard Pipeline (version available on 9/18/18)*

# Skills, Certificates and Education

**Table 9. Top Skills for Crime Scene Investigation Occupations in Bay Region (Sept 2017 - Aug 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Administrative Functions | 4 | Autopsy | 2 | Legal Document Composition | 2 |
| Forensic Science | 4 | DNA | 2 | Legal Documentation | 2 |
| Natural Sciences | 4 | Data Analysis | 2 | Photo Processing | 2 |
| Physics | 4 | Data Collection | 2 | Repair | 2 |
| Quality Assurance and Control | 4 | Database Management | 2 | SAS | 2 |
| Application Support | 3 | Digital Photography | 2 | Adobe Photoshop | 1 |
| Biology | 3 | Document Management | 2 | Basic Mathematics | 1 |
| Chemistry | 3 | Lab Safety | 2 | Big Data | 1 |
| Customer Service | 3 | Laboratory Equipment | 2 | Big Data Analytics | 1 |
| Technical Support | 3 | Laboratory Safety And Chemical Hygiene Plan | 2 | Business Analysis | 1 |
| Training Materials | 3 | Laboratory Testing | 2 | Computer Forensics | 1 |

*Source: Burning Glass*

**Table 10. Education Requirements for Crime Scene Investigation Occupations in Bay Region**

Note: 44% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |
| --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings |
| High school or vocational training | 4 (27%) |
| Associate Degree | 0 (0%) |
| Bachelor’s Degree or Higher | 12 (73%) |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor’s Office MIS system

# Contacts

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