** Industrial & Occupational** **Safety and Health Occupations**

**Labor Market Information Report**

**Las Positas College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

December 2019

# Recommendation

Based on all available data, there appears to be an undersupply of Industrial and Occupational Safety and Health workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda and Contra Costa Counties). There is a projected annual gap of about 147 students in the Bay region and 43 students in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0956.70 - Industrial and Occupational Safety and Health in the state and region. It is recommended that these 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 Las Positas College and in the region.

# Introduction

This report profiles Industrial and Occupational Safety and Health Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Las Positas College.

|  |
| --- |
| * **Occupational Health and Safety Specialists (SOC 29-9011):** Review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. May conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals. May be employed in the public or private sector. Includes environmental protection officers.
 |
| Entry-Level Educational Requirement: Bachelor's degree |
| Training Requirement: None |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 22% |

# Occupational Demand

**Table 1. Employment Outlook for Industrial and Occupational Safety and Health Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2018 Jobs | 2023 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Occupational Health and Safety Specialists |  2,277  |  2,444  | 167 | 7% |  754  |  151  | $33.93 | $44.94 |

*Source: EMSI 2019.3*

**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 Industrial and Occupational Safety and Health Occupations in East Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2018 Jobs | 2023 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Occupational Health and Safety Specialists |  748  |  791  | 43 | 6% |  234  |  47  | $34.15 | $44.47 |

*Source: EMSI 2019.3*

**East Bay Sub-Region** includes Alameda and Contra Costa Counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (November 2018 - October 2019)**

| Occupation | Bay Region | East Bay |
| --- | --- | --- |
|  Occupational Health and Safety Specialists | 1,518 | 462 |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Industrial and Occupational Safety and Health Occupations for latest 12 months (November 2018 - October 2019) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Safety Manager | 468 | Specialist | 9 |
| Safety Specialist | 264 | Chemical Hygiene Officer | 8 |
| Safety Officer | 104 | Occupational Health Nurse | 7 |
| Environmental Specialist | 78 | Industrial Hygiene Specialist | 7 |
| Health Manager | 61 | Advisor | 7 |
| Industrial Hygienist | 58 | Sales Specialist | 6 |
| Manager | 28 | Safety Inspector | 6 |
| Safety Administrator | 25 | Land Use Health Specialist | 6 |
| Reproductive Health Specialist | 22 | Health & Safety Professional | 6 |
| Director, Safety | 17 | Director, Safety, Security | 6 |
| Occupational Health and Safety Specialist | 15 | Director, Drug Safety | 6 |
| Safety Trainer | 12 | Sanitation Specialist | 5 |
| Health Specialist | 12 | Operations Specialist | 5 |
| Safety Director | 10 | Medical Safety Monitor | 5 |

**Table 4b. Top Job Titles for Industrial and Occupational Safety and Health Occupations for latest 12 months (November 2018 - October 2019) East Bay Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | East Bay | Common Title | East Bay |
| Safety Manager | 123 | Materials Management Specialist, Office, Environment | 4 |
| Safety Specialist | 85 | Safety Director | 3 |
| Safety Officer | 38 | Mobile Health Specialist | 3 |
| Industrial Hygienist | 30 | Manager | 3 |
| Health Manager | 28 | Industrial Hygiene Specialist | 3 |
| Environmental Specialist | 25 | Global Supply Manager, Safety, Systems | 3 |
| Reproductive Health Specialist | 15 | Construction Manager | 3 |
| Safety Administrator | 10 | Campus Biosafety Officer, Environment, Health | 3 |
| Occupational Health Nurse | 7 | Sanitation Specialist | 2 |
| Health Specialist | 7 | Safety Inspector | 2 |
| Safety Trainer | 5 | Regional Manager | 2 |
| Health & Safety Professional | 5 | Radiation Protection Specialist | 2 |
| Security Specialist | 4 | Practice Manager | 2 |
| Occupational Health and Safety Specialist | 4 | Order Specialist | 2 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Industrial and Occupational Safety and Health Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2018) | Jobs in Industry (2022) | % Change (2018-22) | % in Industry (2018) |
| Local Government, Excluding Education and Hospitals (903999) | 193 | 202 | 5% | 8% |
| Administrative Management and General Management Consulting Services (541611) | 99 | 123 | 24% | 4% |
| Corporate, Subsidiary, and Regional Managing Offices (551114) | 101 | 108 | 7% | 4% |
| State Government, Excluding Education and Hospitals (902999) | 82 | 87 | 6% | 4% |
| Federal Government, Civilian, Excluding Postal Service (901199) | 82 | 81 | -1% | 4% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715) | 77 | 87 | 13% | 3% |
| Commercial and Institutional Building Construction (236220) | 69 | 82 | 19% | 3% |
| Other Scientific and Technical Consulting Services (541690) | 66 | 63 | -5% | 3% |
| Marketing Consulting Services (541613) | 50 | 63 | 26% | 2% |
| Research and Development in Biotechnology (except Nanobiotechnology) (541714) | 49 | 68 | 39% | 2% |
| General Medical and Surgical Hospitals (622110) | 51 | 48 | -6% | 2% |
| Colleges, Universities, and Professional Schools (State Government) (902612) | 46 | 44 | -4% | 2% |
| Temporary Help Services (561320) | 46 | 49 | 7% | 2% |
| Pharmaceutical Preparation Manufacturing (325412) | 43 | 41 | -5% | 2% |
| Natural Gas Distribution (221210) | 36 | 33 | -8% | 2% |
| Petroleum Refineries (324110) | 32 | 29 | -9% | 1% |
| Engineering Services (541330) | 29 | 31 | 7% | 1% |
| Solid Waste Landfill (562212) | 28 | 26 | -7% | 1% |
| Federal Government, Military (901200) | 27 | 26 | -4% | 1% |
| Electrical Contractors and Other Wiring Installation Contractors (238210) | 25 | 28 | 12% | 1% |
| Electronic Computer Manufacturing (334111) | 25 | 27 | 8% | 1% |
| Colleges, Universities, and Professional Schools (611310) | 25 | 27 | 8% | 1% |

*Source: EMSI 2019.3*

**Table 6. Top Employers Posting Industrial and Occupational Safety and Health Occupations in Bay Region and East Bay Sub-Region (November 2018 - October 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | East Bay |
| Google Inc. | 48 | US Government | 8 | Planned Parenthood | 15 |
| BeiGene | 23 | County Sonoma | 8 | BeiGene | 10 |
| Planned Parenthood | 22 | AECOM Technology Corporation | 8 | University Of California Berkeley | 9 |
| Pacific Gas and Electric Company | 20 | ABM Industries | 8 | University Of California | 8 |
| Twitter | 19 | UC San Francisco Medical Center | 7 | Lawrence Livermore National Laboratory | 8 |
| University California | 14 | Shirley Parsons | 7 | University California | 6 |
| US Navy | 14 | Schnitzer Steel Industries | 7 | Uc San Diego | 6 |
| Stanford University | 13 | Jones Lang Lasalle Incorporated | 7 | Stoneridge Creek | 6 |
| Facebook | 13 | Johnson & Johnson | 7 | Lifelong Medical Care | 6 |
| MV Transportation, Inc. | 12 | Gilead Sciences | 7 | Kaiser Permanente | 6 |
| University Of California San Francisco | 10 | California State University | 7 | Schnitzer Steel Industries | 5 |
| Kaiser Permanente | 10 | BSI | 7 | Lucid Motors Inc | 5 |
| Instacart | 10 | Abbott Laboratories | 7 | Food Drug Administration | 5 |
| University Of California Santa Cruz | 9 | State of California | 6 | Atlas Field Services Incorporated | 5 |
| University Of California Berkeley | 9 | Youtube, LLC | 6 | AECOM Technology Corporation | 5 |
| Lawrence Livermore National Laboratory | 9 | UC San Diego | 6 | US Navy | 4 |
| University Of California | 8 | Sutter Health | 6 | Tesla Motors | 4 |

*Source: Burning Glass*

# Educational Supply

There is one community college (Las Positas College) in the Bay Region issuing 4 awards on average annually (last 3 years) on TOP 0956.70 - Industrial and Occupational Safety and Health.

**Table 7. Awards on TOP 0956.70 - Industrial and Occupational Safety and Health in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificate 18+ units | Total |
| Las Positas College  | East Bay |  2  |  2  |  4  |
| **Total Bay Region** |  **2**  |  **2**  |  **4**  |
| **Total East Bay Sub-Region** |  **2**  |  **2**  |  **4**  |

# *Source: Data Mart*

Note: The annual average for awards is 2015-16 to 2017-18.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 151 annual openings for the Industrial and Occupational Safety and Health occupational cluster and 4 annual (3-year average) awards for an annual undersupply of 147 students. In the East Bay Sub-Region, there is also a gap with 47 annual openings and 4 annual (3-year average) awards for an annual undersupply of 43 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0956.70 - Industrial and Occupational Safety and Health**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay (All CTE Programs) | Las Positas College (All CTE Programs) | State (0956.70) | Bay (0956.70) | East Bay (0956.70) | Las Positas College (0956.70) |
| % Employed Four Quarters After Exit | 74% | 75% | 54% | n/a | n/a | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,000 | $5,586 | n/a | n/a | n/a |
| Median % Change in Earnings | 46% | 28% | 9% | n/a | n/a | n/a |
| % of Students Earning a Living Wage | 63% | 64% | 40% | n/a | n/a | n/a |

*Source: Launchboard Pipeline (version available on 11/22/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Industrial and Occupational Safety and Health Occupations in Bay Region (November 2018 - October 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Occupational Health and Safety | 690 | Public Health and Safety | 97 | Fall Protection | 56 |
| Environmental Health and Safety | 314 | Personal Protective Equipment (PPE) | 93 | Hazardous Waste | 56 |
| Safety Training | 250 | Chemistry | 89 | Onboarding | 56 |
| Project Management | 232 | Training Programs | 88 | Biotechnology | 55 |
| Budgeting | 220 | Hazard Analysis | 85 | Employee Training | 55 |
| Industrial Hygiene | 210 | Quality Assurance and Control | 85 | Injury Prevention | 55 |
| Workers' Compensation | 161 | Contractor Safety | 78 | Physics | 55 |
| Legal Compliance | 152 | Active Server Pages (ASP) | 72 | Policy Development | 55 |
| Customer Service | 141 | Pharmacovigilance | 71 | Emergency Preparedness | 54 |
| Staff Management | 140 | Quality Management | 69 | Teaching | 52 |
| Record Keeping | 117 | Data Analysis | 67 | Technical Support | 52 |
| Surveillance | 116 | Root Cause Analysis | 64 | Environmental Science | 51 |
| Scheduling | 110 | Key Performance Indicators (KPIs) | 59 | Training Materials | 50 |
| Cardiopulmonary Resuscitation (CPR) | 109 | Spreadsheets | 57 | Data Entry | 48 |
| Ergonomics | 107 | Environmental Management | 56 | Public Speaking | 48 |

*Source: Burning Glass*

**Table 10. Certifications for Industrial and Occupational Safety and Health Occupations in Bay Region (November 2018 - October 2019)**

Note: 58% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Certified Safety Professional | 240 | Hazwoper | 12 |
| Driver's License | 206 | Emergency Medical Technician (EMT) | 12 |
| Certified Industrial Hygienist | 125 | Cdl Class C | 12 |
| First Aid Cpr Aed | 61 | Basic Life Saving (BLS) | 11 |
| Construction Health and Safety Technician | 41 | Certified Occupational Health Nurse | 10 |
| Occupational Safety and Health Administration Certification | 35 | Certified Line Clearance Tree Trimmer | 10 |
| Security Clearance | 34 | Certified Arborist | 10 |
| Certified Hazardous Materials Manager | 30 | Licensed Vocational Nurse (LVN) | 9 |
| Registered Hazardous Substances Specialist | 21 | Security Guard Certification | 8 |
| OSHA Safety 30 Hour | 19 | Nurse Practitioner | 8 |
| Basic Cardiac Life Support Certification | 13 | Chartered Life Underwriter (ClU) | 8 |
| Registered Environmental Health Specialist | 12 | Business License | 8 |

*Source: Burning Glass*

**Table 11. Education Requirements for Industrial and Occupational Safety and Health Occupations in Bay Region**

Note: 45% 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 | Percent 12 Mos. Postings |
| High school or vocational training | 180 | 18% |
| Associate Degree | 73 | 7% |
| Bachelor’s Degree or Higher | 769 | 75% |

*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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