** Accounting/ Bookkeeping Occupations**

**Labor Market Information Report**

**West Valley College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

March 2019

# Recommendation

Based on all available data, there appears to be a significant undersupply of Accounting/Bookkeeping workers compared to the demand for this cluster of occupations in the Bay region and in the Silicon Valley sub-region (Santa Clara County). There is a projected annual gap of about 10,081 students in the Bay region and 2,576 students in the Silicon Valley Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0502.00 - Accounting 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 West Valley College and in the region.

# Introduction

This report profiles Accounting/Bookkeeping Occupations in the 12 county Bay region and in the Silicon Valley sub-region for a proposed new program at West Valley College.

|  |
| --- |
| * **Bookkeeping, Accounting, and Auditing Clerks (SOC 43-3031):** Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers. Excludes “Payroll and Timekeeping Clerks” (43-3051).
 |
| Entry-Level Educational Requirement: Some college, *no degree* |
| Training Requirement: Moderate-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 48% |
|  |
| * **Accountants and Auditors (SOC 13-2011):** Examine, analyze, and interpret accounting records to prepare financial statements, give advice, or audit and evaluate statements prepared by others. Install or advise on systems of recording costs or other financial and budgetary data. Excludes “Tax Examiners and Collectors, and Revenue Agents” (13-2081).
 |
| Entry-Level Educational Requirement: Bachelor's *degree* |
| Training Requirement: None |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 16*%* |

# Occupational Demand

**Table 1. Employment Outlook for Accounting/Bookkeeping Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Bookkeeping, Accounting, and Auditing Clerks | 48,359 | 49,642 | 1,283  | 3% | 28,300 | 5,660 | $15.46  | $23.85  |
| Accountants and Auditors | 48,540 | 52,802 | 4,262  | 9% | 26,214 | 5,243 | $25.20  | $37.58  |
| **Total** | **96,898** | **102,443** | **5,545**  | **6%** | **54,514** | **10,903** | **$20.34**  | **$30.73**  |

*Source: EMSI 2019.1*

**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 Accounting/Bookkeeping Occupations in Silicon Valley Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Bookkeeping, Accounting, and Auditing Clerks | 11,344 | 11,705 | 361  | 3% | 6,685 | 1,337 | $15.07  | $22.99  |
| Accountants and Auditors | 13,593 | 14,904 | 1,311  | 10% | 7,461 | 1,492 | $25.11  | $39.10  |
| **TOTAL** | **24,937** | **26,609** | **1,672**  | **7%** | **14,146** | **2,829** | **$20.54**  | **$31.77**  |

*Source: EMSI 2019.1*

**Silicon Valley Sub-Region** includes Santa Clara County

### Job Postings in Bay Region and Silicon Valley Sub-Region

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

| Occupation | Bay Region | Silicon Valley |
| --- | --- | --- |
|  Accountants (13-2011.01) | 12,350 | 2,822 |
|  Bookkeeping, Accounting, and Auditing Clerks (43-3031.00) | 11,841 | 2,725 |
|  Auditors (13-2011.02) | 3,179 | 0 |
|  **Total** |  **27,370**  |  **5,547**  |

*Source: Burning Glass*

**Table 4. Top Job Titles for Accounting/Bookkeeping Occupations for latest 12 months (March 2018 - Feb 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | Silicon Valley | Common Title | Bay | Silicon Valley |
| Accountant | 2,924 | 746 | Cost Accountant | 349 | 120 |
| Senior Accountant | 2,274 | 368 | Senior Tax Associate | 344 | 118 |
| Staff Accountant | 1,752 | 269 | Tax Accountant | 312 | 77 |
| Bookkeeper | 1,726 | 341 | Specialist | 306 | 50 |
| Accounting Clerk | 1,341 | 305 | Accounts Payable | 277 | 56 |
| Accounts Payable Specialist | 1,278 | 325 | Fund Accountant | 249 | 29 |
| Accounts Payable Clerk | 984 | 216 | Property Accountant | 231 | 17 |
| Accounts Receivable Clerk | 600 | 110 | Project Accountant | 225 | 49 |
| Accounting Assistant | 553 | 140 | Accounting Manager | 181 | 64 |
| Accounts Receivable Specialist | 544 | 110 | Bookkeeper/Office Manager | 180 | 42 |
| Revenue Accountant | 440 | 164 | Financial Accountant | 162 | 30 |
| Accounting Specialist | 429 | 109 | Tax Associate | 162 | 34 |
| Junior Accountant | 412 | 96 | Accounting Associate | 158 | 50 |
| General Ledger Accountant | 405 | 130 | Accounts Receivable | 138 | 38 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Accounting/Bookkeeping 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) |
| Offices of Certified Public Accountants (541211) | 8,582 | 8,582 | 8% | 8.8% |
| Other Accounting Services (541219) | 6,353 | 6,522 | 7% | 6.7% |
| Corporate, Subsidiary, and Regional Managing Offices (551114) | 5,298 | 5,599 | 10% | 5.7% |
| Local Government, Excluding Education and Hospitals (903999) | 3,573 | 3,574 | 3% | 3.7% |
| Tax Preparation Services (541213) | 2,473 | 2,557 | 11% | 2.6% |
| Custom Computer Programming Services (541511) | 1,896 | 1,929 | 14% | 2.0% |
| Payroll Services (541214) | 1,657 | 1,909 | 24% | 2.0% |
| Internet Publishing and Broadcasting and Web Search Portals (519130) | 1,705 | 1,787 | 37% | 1.8% |
| Colleges, Universities, and Professional Schools (State Government) (902612) | 1,432 | 1,469 | 6% | 1.5% |
| Office Administrative Services (561110) | 1,503 | 1,330 |  (16%) | 1.4% |
| Computer Systems Design Services (541512) | 1,186 | 1,170 | 8% | 1.2% |
| Religious Organizations (813110) | 1,162 | 1,163 |  (1%) | 1.2% |
| Colleges, Universities, and Professional Schools (611310) | 1,091 | 1,107 | 7% | 1.1% |
| Software Publishers (511210) | 985 | 1,033 | 22% | 1.1% |
| Electronic Computer Manufacturing (334111) | 977 | 1,008 | 8% | 1.0% |
| Hotels (except Casino Hotels) and Motels (721110) | 941 | 941 |  (1%) | 1.0% |

*Source: EMSI 2019.1*

**Table 6. Top Employers Posting Accounting/Bookkeeping Occupations in Bay Region and Silicon Valley Sub-Region (March 2018 - Feb 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Silicon Valley |
| Marriott International Incorporated | 105 | Gilead Sciences | 25 | Google Inc. | 64 |
| Bvoh | 78 | Republic Bancorp | 25 | Stanford University | 46 |
| Ernst & Young | 78 | Jones Lang Lasalle Incorporated | 24 | Ernst & Young | 35 |
| Google Inc. | 68 | Sfmta | 24 | Marriott International Incorporated | 32 |
| Intuit | 53 | Williams-Sonoma | 23 | Intuit | 24 |
| Stanford University | 53 | 3 Bridge Networks | 22 | Cisco Systems Incorporated | 23 |
| Uber | 53 | ARC Document Solutions | 22 | Deloitte | 21 |
| Deloitte | 50 | Rsi | 22 | Intellipro Incorporated | 19 |
| Anderson Frank | 37 | Juul Labs | 21 | Fortinet Incorporated | 17 |
| University California | 37 | Avispa Incorporated | 20 | Infinera | 17 |
| Sprouts Farmers Markets | 36 | Intellipro Incorporated | 20 | Proofpoint Incorporated | 17 |
| Moss Adams Llp | 32 | Mitsubishi | 20 | Proofpoint | 16 |
| US Army | 32 | Square Incorporated | 20 | Rosendin Electric Incorporated | 16 |
| Redpoint Ventures | 31 | Blue Cross Blue Shield of California | 19 | Western Digital | 16 |
| Bio-Rad Laboratories | 30 | Novogradac Company Llp | 19 | Bvoh | 14 |
| University Of California Berkeley | 30 | Alameda Health System | 17 | City San Jose | 14 |
| California State University | 29 | Ascent | 17 | Penske Automotive Group | 14 |
| Kaiser Permanente | 28 | Clorox Company | 17 | Calix | 13 |
| Cisco Systems Incorporated | 27 | Fortinet Incorporated | 17 | California State University | 12 |
| Uc San Diego | 27 | Infinera | 17 | Flexton Incorporated | 12 |
| Bpm | 26 | Ltd Global | 17 | Chegg Inc | 11 |
| Payjunction | 26 | Proofpoint | 17 | San Jose State University | 11 |
| Salesforce | 26 | Proofpoint Incorporated | 17 | Servicenow | 11 |
| BDO International | 25 | Rosendin Electric Incorporated | 17 | Armanino | 10 |

*Source: Burning Glass*

# Educational Supply

There are 28 community colleges in the Bay Region issuing 822 awards on average annually (last 3 years) on TOP 0502.00 – Accounting. There are six colleges in the Silicon Valley Sub-Region issuing 253 awards on average annually (last 3 years) on this TOP code.

**Table 7. Awards on TOP 0502.00 - Accounting in the Bay Region**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Headcount | Associates | Certificates | Non Credit | Total |
| Berkeley City College  | East Bay | 253 | 5 | 10 |  | 16 |
| Cabrillo College  | Santa Cruz - Monterey | 702 | 22 | 35 |  | 57 |
| Cañada College  | Mid Peninsula | 279 | 10 | 13 |  | 23 |
| Chabot College  | East Bay | 1,301 | 20 | 38 |  | 58 |
| City College of San Francisco  | Mid Peninsula | 1,056 | 6 | 11 |  | 17 |
| College of Alameda  | East Bay | 269 | 12 | 2 |  | 13 |
| College of Marin  | North Bay | 219 | 2 | 5 |  | 7 |
| College of San Mateo  | Mid Peninsula | 1,552 | 30 | 95 |  | 125 |
| Contra Costa College  | East Bay | 255 |  | 6 |  | 6 |
| De Anza College  | Silicon Valley | 2,878 | 32 | 47 |  | 79 |
| Diablo Valley College  | East Bay | 1,955 | 11 | 31 |  | 42 |
| Evergreen Valley College  | Silicon Valley | 712 | 25 | 6 |  | 31 |
| Foothill College  | Silicon Valley | 3,677 | 26 | 64 |  | 90 |
| Gavilan College  | Santa Cruz - Monterey | 382 | 9 | 2 |  | 11 |
| Hartnell College  | Santa Cruz - Monterey | 417 |  | 1 |  | 1 |
| Laney College  | East Bay | 931 | 13 | 6 |  | 19 |
| Las Positas College  | East Bay | 628 |  | 6 |  | 6 |
| Los Medanos College  | East Bay | 384 | 13 | 8 |  | 21 |
| Merritt College  | East Bay | 93 | 7 | 3 |  | 10 |
| Mission College  | Silicon Valley | 826 | 13 | 9 |  | 22 |
| Monterey Peninsula College  | Santa Cruz - Monterey | 479 | 4 | 3 |  | 7 |
| Napa Valley College  | North Bay | 372 | 9 | 5 |  | 14 |
| Ohlone College  | East Bay | 912 | 4 | 4 |  | 8 |
| San Francisco City Centers | Mid Peninsula | 365 |  |  | 25 | 25 |
| San Jose City College  | Silicon Valley | 458 | 16 | 11 |  | 27 |
| Santa Rosa Junior College  | North Bay | 1,369 |  | 34 |  | 34 |
| Skyline College  | Mid Peninsula | 1,047 | 19 | 13 |  | 32 |
| Solano College  | North Bay | 523 | 9 | 8 |  | 16 |
| West Valley College | Silicon Valley | 730 |  | 4 |  | 4 |
| **Total Bay Region** |  |  **25,024**  |  **317**  |  **480**  |  **25**  |  **822**  |
| **Total Silicon Valley Sub Region** |  | **9,281** | **112** | **141** | **0** | **253** |

# *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 is a large labor market gap in the Bay region with 10,903 annual openings for the Accounting/Bookkeeping occupational cluster and 822 annual (3-year average) awards for an annual undersupply of 10,081 students. In the Silicon Valley Sub-Region, there is also a gap with 2,829 annual openings and 253 annual (3-year average) awards for an annual undersupply of 2,576 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0502.00 - Accounting**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay (All CTE Programs) | West Valley College (All CTE Programs) | State (0502.00) | Bay (0502.00) | Silicon Valley (0502.00) | West Valley College (0502.00) |
| % Employed Four Quarters After Exit | 74% | 68% | 72% | 75% | 77% | 60% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $9,771 | $10,000 | $11,929 | $14,070 | $11,306 |
| Median % Change in Earnings | 46% | 41% | 53% | 67% | 110% | 67% |
| % of Students Earning a Living Wage | 63% | 57% | 65% | 70% | 76% | 65% |

*Source: Launchboard Pipeline (version available on 3/27/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Accounting/Bookkeeping Occupations in Bay Region (March 2018 - Feb 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Accounting | 20,342 | Customer Billing | 3,177 | Sarbanes-Oxley (SOX) | 1,656 |
| Account Reconciliation | 7,405 | Balance Sheet | 3,042 | Payroll Processing | 1,635 |
| Accounts Payable / Accounts Receivable | 5,529 | External Auditing | 2,781 | Accounting Management | 1,616 |
| General Ledger | 5,463 | Customer Checkout | 2,529 | SAP | 1,406 |
| Generally Accepted Accounting Principles (GAAP) | 5,080 | Public Accounting | 2,377 | Invoicing | 1,404 |
| Month-End Close Processes | 4,719 | Expense Reports | 2,361 | General Ledger Accounting | 1,394 |
| Bookkeeping | 3,949 | Customer Service | 2,326 | Customer Contact | 1,337 |
| Financial Statements | 3,890 | Spreadsheets | 2,326 | Fixed Assets | 1,325 |
| Financial Reporting | 3,850 | NetSuite | 2,145 | Cash Deposits and Receipts | 1,244 |
| Budgeting | 3,658 | Accruals | 2,034 | Tax Returns | 1,224 |
| Quickbooks | 3,591 | Bank Reconciliation | 1,949 | Calculation | 1,213 |
| Data Entry | 3,462 | Accounting Systems | 1,939 | Pivot Tables | 1,184 |
| Scheduling | 3,440 | Oracle | 1,868 | Business Administration | 1,048 |
| Enterprise Resource Planning (ERP) | 3,227 | Accounting Software | 1,762 | Invoice Preparation | 1,024 |
| Invoice Processing | 3,210 | Financial Analysis | 1,734 | Payables | 998 |

*Source: Burning Glass*

**Table 10. Certifications for Accounting/Bookkeeping Occupations in the Bay Region (March 2018 - Feb 2019)**

Note: 79% 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 Public Accountant (CPA) | 4,304 | Certified Professional Coder | 9 |
| Driver's License | 432 | Professional Development | 9 |
| Financial Accounting Standards Board (FASB) | 119 | Certified Medical Assistant | 8 |
| Certificate in Accounting | 88 | Certified Fraud Examiner (CFE) | 7 |
| Business License | 72 | Certified Treasury Professional (CTP) | 7 |
| Institute of Internal Auditors (IIA) | 69 | Leadership In Energy And Environmental Design (LEED) Certified | 7 |
| Licensed Attorney | 41 | Cdl Class C | 6 |
| Certified Payroll Professional (CPP) | 40 | Certified Management Accountant (CMA) | 6 |
| Certified Information Systems Auditor (CISA) | 34 | Chartered Financial Analyst (CFA) | 6 |
| Certified Internal Auditor (CIA) | 29 | Fundamental Payroll Certification | 6 |
| Security Clearance | 29 | Registered Dietitian | 6 |
| Certified Financial Planner (CFP) | 20 | Accounts Receivable Clerk Certificate | 5 |
| Bookkeeping Certification | 16 | Certified Outpatient Coding (COC) | 5 |
| Investment Advisor | 15 | Cisco Certified Internetwork Professional (CCIP) | 5 |
| Project Management Certification | 15 | Gaming & Vending Technician (GVT) | 5 |
| Quickbooks Certification | 14 | General Business | 5 |
| Certified Information Systems Security Professional (CISSP) | 12 | IT Infrastructure Library (ITIL) Certification | 5 |
| Certified Protection Professional (CPP) | 12 | Registered Cardiac Sonographer | 5 |
| Chartered Accountant | 12 | Sarbanes-Oxley (SOX) Certification | 5 |
| Tax Preparation Certificate | 12 | Taxation Certification | 5 |
| Medical Billing and Coding Certification | 10 | Certified Associate in Software Quality | 4 |

*Source: Burning Glass*

**Table 11. Education Requirements for Accounting/Bookkeeping Occupations in Bay Region**

Note: 34% 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 | 1,739 (11%) |
| Associate Degree | 986 (6%) |
| Bachelor’s Degree or Higher | 13,250 (83%) |

*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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