** Library Information Technology Occupations**

**Labor Market Information Report**

**City College of San Francisco**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

February 2019

# Recommendation

Based on all available data, there appears to be an undersupply of Library Information Technology 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). There is a projected annual gap of about 1,135 students in the Bay region and 348 students in the Mid-Peninsula Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 1602.00 - Library Technician 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 City College of San Francisco and in the region.

# Introduction

This report profiles Library Information Technology Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for the proposed revision to an existing program at City College of San Francisco.

|  |
| --- |
| * **Library Technicians (SOC 25-4031):** Assist librarians by helping readers in the use of library catalogs, databases, and indexes to locate books and other materials; and by answering questions that require only brief consultation of standard reference. Compile records; sort and shelve books or other media; remove or repair damaged books or other media; register patrons; and check materials in and out of the circulation process. Replace materials in shelving area (stacks) or files. Includes bookmobile drivers who assist with providing services in mobile libraries.
 |
| *Entry-Level Educational Requirement: Postsecondary nondegree award* |
| *Training Requirement: None* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 27%* |
|  |
| * **Library Assistants, Clerical (SOC** **43-4121):** Compile records, sort, shelve, issue, and receive library materials such as books, electronic media, pictures, cards, slides and microfilm. Locate library materials for loan and replace material in shelving area, stacks, or files according to identification number and title. Register patrons to permit them to borrow books, periodicals, and other library materials. Excludes “Library Technicians” (25-4031).
 |
| *Entry-Level Educational Requirement: High school diploma or equivalent* |
| *Training Requirement: Short-term on-the-job training* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 34%* |

# Occupational Demand

**Table 1. Employment Outlook for Library Information Technology 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 |
| Library Technicians | 3,234 | 3,878 | 644  | 20% | 2,940 | 588 | $17.36  | $25.19  |
| Library Assistants, Clerical | 2,757 | 3,454 | 697  | 25% | 2,845 | 569 | $11.01  | $18.79  |
| **Total** | **5,991** | **7,332** | **1,341**  | **22%** | **5,785** | **1,157** | **$14.44**  | **$22.24**  |

*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 Library Information Technology Occupations in Mid-Peninsula 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 |
| Library Technicians | 795 | 1,101 | 306  | 39% | 913 | 183 | $20.48  | $28.44  |
| Library Assistants, Clerical | 696 | 1,029 | 333  | 48% | 923 | 185 | $11.50  | $21.71  |
| **TOTAL** | **1,490** | **2,130** | **639**  | **43%** | **1,835** | **367** | **$16.29**  | **$25.29**  |

*Source: EMSI 2019.1*

**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 (Feb 2018 - Jan 2018)**

| Occupation | Bay Region | Mid-Peninsula |
| --- | --- | --- |
|  Library Technicians | 194 | 61 |
|  Library Assistants, Clerical | 179 | 29 |
| **Total** | **373** | **90** |

*Source: Burning Glass*

**Table 4. Top Job Titles for Library Information Technology Occupations for latest 12 months (Feb 2018 - Jan 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | Mid-Peninsula | Common Title | Bay | Mid-Peninsula |
| Library Assistant | 123 | 35 | Library Technician, Elementary, School | 4 |  |
| Library Technician | 29 | 4 | Media Specialist | 4 | 1 |
| Library Aide | 22 | 11 | Senior Library Media Technician | 4 |  |
| Library Clerk | 17 | 1 | Clerk | 3 |  |
| Library Media Technician | 14 | 2 | Lead Library Clerk, Promotional | 3 |  |
| Library Page | 14 | 5 | Library Aide, Access, Services | 3 | 3 |
| Services Specialist | 8 | 7 | Library Clerk, Elementary | 3 |  |
| Library Specialist | 7 |  | Library Media Technician, Elementary, Point Of Sale | 3 |  |
| Library Technician, Middle School | 7 |  | Library Page On-Call | 3 |  |
| Library Media Technician, Elementary | 6 |  | School Library Technician | 3 |  |
| School Library Clerk, Elementary, School | 5 |  | Typist | 3 |  |
| Library Technician, Campus | 4 | 1 | 3602 Library Page | 2 | 2 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Library Information Technology 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) |
| Internet Publishing and Broadcasting and Web Search Portals (519130) | 1,988 | 2,091 | 50% | 33.9% |
| Local Government, Excluding Education and Hospitals (903999) | 1,788 | 1,800 | 7% | 29.2% |
| Colleges, Universities, and Professional Schools (611310) | 765 | 792 | 14% | 12.9% |
| Colleges, Universities, and Professional Schools (State Government) (902612) | 725 | 763 | 18% | 12.4% |
| Colleges, Universities, and Professional Schools (Local Government) (903612) | 305 | 290 |  (15%) | 4.7% |
| Elementary and Secondary Schools (Local Government) (903611) | 249 | 249 | 9% | 4.0% |

*Source: EMSI 2019.1*

**Table 6. Top Employers Posting Library Information Technology Occupations in Bay Region and Mid-Peninsula Sub-Region (Feb 2018 - Jan 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Mid-Peninsula |
| County San Mateo | 11 | San Mateo County Health | 4 | County San Mateo | 11 |
| Santa Rosa City Schools | 8 | Santa Clara Unified School District | 4 | University San Francisco | 8 |
| University Of California | 8 | University California | 4 | City Redwood City | 4 |
| University San Francisco | 8 | Windsor Unified | 4 | San Mateo County Health | 4 |
| Alum Rock Union Elementary | 7 | City Benicia | 3 | San Mateo County | 3 |
| Cupertino Union School District | 7 | City Richmond | 3 | South San Francisco Unified | 3 |
| University Of California Berkeley | 7 | City Salinas | 3 | Academy Art University | 2 |
| City San Jose | 6 | City Santa Clara | 3 | Alliant International University | 2 |
| Napa Valley Unified | 6 | Contra Costa Community College District | 3 | Austin Community College | 2 |
| City Of San Jose City Hall | 5 | East Side High School District | 3 | City and County of San Francisco | 2 |
| Pleasanton Unified School District | 5 | Harker School | 3 | Golden Gate University | 2 |
| Berryessa Union Elementary | 4 | In House Vacancy Internal Candidates Only | 3 | Shanti Project Of San Francisco | 2 |
| City Palo Alto | 4 | Lucile Packard Childrens Hospital | 3 | The South San Francisco Unified School District | 2 |
| City Redwood City | 4 | Oak Grove School District | 3 | UC San Francisco Medical Center | 2 |
| Fremont Unified School District | 4 | Recreation Neighborhood Services | 3 | University Of California Berkeley | 2 |
| Pajaro Valley Unified School District | 4 | San Jose Unified School District | 3 | Backstage Library Works | 1 |
| Salinas City Elementary | 4 | San Mateo County | 3 | Belmont Redwood Shores School District | 1 |

*Source: Burning Glass*

# Educational Supply

There are two community colleges in the Bay Region issuing 22 awards on average annually (last 3 years) on TOP 1602.00 - Library Technician. CCSF is the only college in the Mid-Peninsula Sub-Region issuing awards on this TOP code, issuing 19 awards on average annually (last 3 years).

**Table 7. Awards on TOP 1602.00 - Library Technician in the Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Headcount | Associates | Certificates | Total |
| **Diablo Valley** | East Bay | 91 | 0 | 3 | 3 |
| **San Francisco** | Mid-Peninsula | 54 | 4 | 15 | 19 |
| **Total Bay Region** | **145** | **4** | **18** | **22** |
| **Total Mid-Peninsula Sub-Region** | **54** | **4** | **15** | **19** |

# *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 1,157 annual openings for the Library Information Technology occupational cluster and 22 annual (3-year average) awards for an annual undersupply of 1,135 students. In the Mid-Peninsula Sub-Region, there is also a gap with 367 annual openings and 19 annual (3-year average) awards for an annual undersupply of 348 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1602.00 - Library Technician**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay (All CTE Programs) | City College of San Francisco (All CTE Programs) | State (TOP 1602) | Bay (TOP 1602) | Mid-Peninsula (TOP 1602) | City College of San Francisco (TOP 1602) |
| % Employed Four Quarters After Exit | 74% | 72% | 85% | 87% | 86% | 86% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,170 | $7,636 | $9,041 | $9,082 | $9,082 |
| Median % Change in Earnings | 46% | 31% | 46% | 83% | 163% | 163% |
| % of Students Earning a Living Wage | 63% | 65% | 53% | 48% | n/a | n/a |

*Source: Launchboard Pipeline (version available on 2/19/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Library Information Technology Occupations in Bay Region (Feb 2018 - Jan 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Scheduling | 63 | Scanners | 17 | Office Equipment | 12 |
| Repair | 61 | Conflict Management | 16 | Supervisory Skills | 12 |
| Record Keeping | 52 | Materials Processing | 16 | Taking Messages | 12 |
| Customer Service | 51 | Business English | 15 | Copy Cataloging | 11 |
| Budgeting | 39 | Cleaning | 14 | Lifting Ability | 11 |
| Sorting | 35 | Library Programming | 14 | Mailing | 11 |
| Calculation | 30 | Mail Sorting | 14 | Merchandising | 11 |
| Data Entry | 29 | Statistical Reporting | 14 | Purchase Order Preparation | 11 |
| Staff Management | 29 | Customer Billing | 13 | Social Media | 11 |
| Library Resources | 28 | Customer Checkout | 13 | Technical Support | 11 |
| Printers | 28 | Music | 13 | Appointment Setting | 10 |
| Spreadsheets | 26 | Shelving | 13 | Cash Register Operation | 10 |
| Clerical Duties | 25 | Indexing | 12 | Metadata | 10 |
| Teaching | 21 | Network Hardware/Software  | 12 | Public Libraries | 10 |

*Source: Burning Glass*

**Table 10. Certifications for Library Information Technology Occupations in the Bay Region (Feb 2018 - Jan 2018)**

Note: 87% 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 |
| Driver's License | 27 | Cisco Certified Network Associate (CCNA) | 3 |
| Cdl Class C | 5 | Computer Maintenance Certification | 1 |
| First Aid Cpr Aed | 5 | Natural Science Certificate | 1 |
| Typing Certification | 5 | Project Management Certification | 1 |
| Business License | 3 | Security Clearance | 1 |
| Certified Occupational Therapy Assistant (COTA) | 3 | Word Processing Certification | 1 |

*Source: Burning Glass*

**Table 11. Education Requirements for Library Information Technology Occupations in Bay Region**

Note: 50% 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 | 126 (67%) |
| Associate Degree | 20 (11%) |
| Bachelor’s Degree or Higher | 42 (22%) |

*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

For more information, please contact:

* Doreen O’Donovan, Data Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), doreen@baccc.net or (831) 479-6481
* John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, jcarrese@ccsf.edu or (415) 267-6544