



# Project Management Occupations Labor Market Information Report San Jose City College

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 Project Management 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 17,070 students in the Bay region and 5,675 students in the Silicon Valley Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0514.00 Office Technology/Office Computer Applications programs 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 San Jose City College and in the region.

This report profiles Project Management Occupations in the 12 county Bay region and in the Silicon Valley sub-region for College/District program review at San Jose City College.

- **Computer and Information Systems Managers (11-3021):** Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming. Excludes “Computer Occupations” (15-1111 through 15-1199).  
Entry-Level Educational Requirement: Bachelor’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 21%
- **Management Analysts (13-1111):** Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants. Excludes “Computer Systems Analysts” (15-1121) and “Operations Research Analysts” (15-2031).  
Entry-Level Educational Requirement: Bachelor’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 16%
- **Project Management Specialists and Business Operations Specialists, All Other (13-1198):** All business operations specialists not listed separately.  
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 Project Management Occupations in Bay Region**

Occupation	2020 Jobs	2025 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Computer and Information Systems Managers	41,087	45,036	3,949	10%	21,700	4,340	\$78	\$103
Management Analysts	34,653	37,078	2,425	7%	21,165	4,233	\$40	\$77
Project Management Specialists and Business Operations Specialists, All Other	71,736	76,237	4,501	6%	43,532	8,706	\$37	\$71
<b>Total</b>	<b>147,476</b>	<b>158,351</b>	<b>10,875</b>	<b>7%</b>	<b>86,397</b>	<b>17,279</b>		

Source: EMSI 2021.3

**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 Project Management Level 1 Occupations in Silicon Valley Sub-region**

Occupation	2020 Jobs	2025 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Computer and Information Systems Managers	16,192	17,735	1,543	10%	8,531	1,706	\$83	\$117
Management Analysts	9,185	9,853	667	7%	5,702	1,140	\$ 42	\$ 79
Project Management Specialists and Business Operations Specialists, All Other	23,080	24,657	1,577	7%	14,188	2,838	\$ 40	\$ 77
<b>Total</b>	<b>48,457</b>	<b>52,245</b>	<b>3,788</b>	<b>8%</b>	<b>28,421</b>	<b>5,684</b>		

Source: EMSI 2021.3

**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 (Nov 2020 - Oct 2021)**

Occupation	Bay Region	Silicon Valley
Marketing Managers	39,552	12,501
Management Analysts	12,512	4,160
Online Merchants	1,203	256
Security Management Specialists	969	293
Business Continuity Planners	596	225
Business Operations Specialists, All Other	289	76
Energy Auditors	229	33
Sustainability Specialists	143	29

Occupation	Bay Region	Silicon Valley
Customs Brokers	82	2

Source: Burning Glass

**Table 4a. Top Job Titles for Project Management Occupations for latest 12 months (Nov 2020 - Oct 2021)  
Bay Region**

Title	Bay	Title	Bay
Product Manager	1,608	Principal Product Manager	173
Business Analyst	1,258	Marketing Operations Manager	169
Senior Product Manager	810	Content Marketing Manager	165
Product Marketing Manager	770	Target Security Specialist	162
Marketing Manager	747	Director, Product Management	154
Senior Business Analyst	321	Growth Marketing Manager	134
Digital Marketing Manager	285	Consultant	131
Technical Product Manager	206	Marketing Director	129
Director Of Marketing	179	Director Of Product Management	123

Source: Burning Glass

**Table 4b. Top Job Titles for Project Management Occupations for latest 12 months (Nov 2020 - Oct 2021)  
Silicon Valley Sub-Region**

Title	Silicon Valley	Title	Silicon Valley
Product Manager	534	Principal Product Manager	65
Business Analyst	387	Business Analyst II	43
Senior Product Manager	247	Consultant	43
Product Marketing Manager	232	Director Of Product Management	40
Marketing Manager	210	Field Marketing Manager	38
Senior Business Analyst	99	Director Of Marketing	37
Director, Product Management	80	Marketing Operations Manager	37
Digital Marketing Manager	78	Business Analyst I	35
Technical Product Manager	68	Business Process Analyst	33

Source: Burning Glass

## Industry Concentration

**Table 5. Industries hiring Project Management Workers in Bay Region**

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2020)	Jobs in Industry (2025)	% Change (2020-25)	% Occupation Group in Industry (2020)
Administrative Management and General Management Consulting Services	7,569	8,552	13%	7%
Custom Computer Programming Services	6,849	7,957	16%	6%
Federal Government, Civilian, Excluding Postal Service	5,012	5,061	1%	4%
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	4,507	4,773	6%	4%
Internet Publishing and Broadcasting and Web Search Portals	3,654	4,486	23%	3%
Electronic Computer Manufacturing	4,046	4,478	11%	4%
Marketing Consulting Services	3,842	4,157	8%	3%
Corporate, Subsidiary, and Regional Managing Offices	4,570	4,156	-9%	4%
Software Publishers	3,486	4,072	17%	3%
Computer Systems Design Services	3,696	4,043	9%	3%

Source: EMSI 2021.3

**Table 6. Top Employers Posting Project Management Occupations in Bay Region and Silicon Valley Sub-Region (Nov 2020 - Oct 2021)**

Employer	Bay	Employer	Silicon Valley
Facebook	947	Google Inc.	607
Google Inc.	916	Cisco Systems Incorporated	484
Salesforce	825	Paypal	372
Uber	683	Palo Alto Networks	358
Cisco Systems Incorporated	625	Microsoft Corporation	356
Anthem Blue Cross	620	Vmware Incorporated	337
Microsoft Corporation	525	Intuit	311
Vmware Incorporated	524	Apple Inc.	303
Paypal	507	Anthem Blue Cross	292
Accenture	444	Deloitte	280

Source: Burning Glass

## Educational Supply

There are 21 community colleges in the Bay Region issuing 209 awards on average annually (last 3 years ending 2018-19) on TOP 0514.00 Office Technology/Office Computer Applications. In the Silicon Valley Sub-Region, there are five (5) community colleges that issued 9 awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0514.00 Office Technology/Office Computer Applications in Bay Region**

College	Subregion	Associate	Certificate Low	Noncredit	Total
Cabrillo	SC-Monterey	4	28	0	32
Canada	Mid-Peninsula	1	2	0	3
Chabot	East Bay	6	5	0	11
Contra Costa	East Bay	5	5	0	10
Diablo Valley	East Bay	0	2	0	2
Evergreen Valley	Silicon Valley	1	0	0	1
Gavilan	Silicon Valley	1	1	0	2
Hartnell	SC-Monterey	8	8	0	16
Laney	East Bay	3	1	0	4
Las Positas	East Bay	0	1	0	1
Los Medanos	East Bay	4	3	0	7
Mission	Silicon Valley	1	2	0	3
Napa	North Bay	1	0	0	1
Ohlone	East Bay	0	1	0	1
San Francisco	Mid-Peninsula	3	4	0	7
San Francisco Ctrs	Mid-Peninsula	0	1	19	20
San Jose City	Silicon Valley	0	2	0	2
San Mateo	Mid-Peninsula	1	5	0	6
Santa Rosa	North Bay	9	34	20	63
Skyline	Mid-Peninsula	2	3	0	5
Solano	North Bay	5	6	0	11
West Valley	Silicon Valley	0	1	0	1
<b>Total</b>		<b>55</b>	<b>115</b>	<b>39</b>	<b>209</b>

Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 17,279 annual openings for the Project Management occupational cluster and 209 annual (3-year average) awards for an annual undersupply of 17,070 students. In the Silicon Valley Sub-Region, there is also a gap with 5,684 annual openings and 9 annual (3-year average) awards for an annual undersupply of 5,675 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0514.00**

### Office Technology/Office Computer Applications

Metric Outcomes	Bay All CTE Programs	San Jose City All CTE Programs	State 0514.00	Bay 0514.00	Silicon Valley 0514.00	San Jose City 0514.00
Students with a Job Closely Related to Their Field of Study	73%	68%	63%	66%	62%	62%
Median Annual Earnings for SWP Exiting Students	\$44,575	\$40,814	\$30,323	\$38,647	\$42,017	\$42,763
Median Change in Earnings for SWP Exiting Students	30%	31%	17%	16%	26%	28%
Exiting Students Who Attained the Living Wage	53%	50%	42%	39%	41%	37%

Source: Launchboard Strong Workforce Program Median of 2016-18.

## Skills, Certifications and Education

**Table 9. Top Skills for Project Management Occupations in Bay Region (Nov 2020 - Oct 2021)**

Skill	Posting	Skill	Posting
Product Management	21,573	Business Development	5,137
Project Management	12,108	SQL	4,790
Marketing	12,034	E-Commerce	4,668
Product Marketing	9,836	Business Process	4,307
Product Development	8,940	Digital Marketing	4,183
Budgeting	8,355	Product Sales	4,183
Software as a Service (SaaS)	6,282	Stakeholder Management	4,066
Market Strategy	6,148	Social Media	4,035
Key Performance Indicators (KPIs)	5,951	Thought Leadership	4,011
Customer Service	5,818	Data Science	3,929
Business Analysis	5,804	Data Analysis	3,602
Business-to-Business	5,710	Market Research	3,549
Marketing Management	5,652	Competitive Analysis	3,228

Skill	Posting	Skill	Posting
Salesforce	5,335	Experiments	3,214

Source: Burning Glass

**Table 10. Certifications for Project Management Occupations in Bay Region (Nov 2020 - Oct 2021)**

Certification	Posting	Certification	Posting
Driver's License	867	Series 7	96
Project Management Certification	773	Certified ScrumMaster (CSM)	88
Project Management Professional (PMP)	451	Certified Scrum Product Owner (CSPO)	86
Certified Information Systems Security Professional (CISSP)	243	Lean Six Sigma Certification	81
Certified Public Accountant (CPA)	203	Six Sigma Black Belt Certification	77
IT Infrastructure Library (ITIL) Certification	198	Six Sigma Green Belt Certification	75
Security Clearance	174	Certified Salesforce Administrator	75
Six Sigma Certification	160	Agile Certification	71
Certified Information Systems Auditor (CISA)	142	Business Analysis Certificate	70
Certified Information Security Manager (CISM)	100	Certified Business Analysis Professional (CBAP)	65

Source: Burning Glass

Note: 93% of records have been excluded because they do not include a certification. As a result, the chart above may not be representative of the full sample.

**Table 11. Education Requirements for Project Management Occupations in Bay Region**

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	750	2%
Associate's degree	497	1%
Bachelor's degree and higher	33,888	97%

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 CCCCCO 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:

- Leila Jamoosian, Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), [leila@bacc.net](mailto:leila@bacc.net)
- John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, [jcarrese@ccsf.edu](mailto:jcarrese@ccsf.edu) or (415) 267-6544