

Cloud Computing Occupations Labor Market Information Report College of San Mateo

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 a significant undersupply of Cloud Computing 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 gap is about 5,541 students annually in the Bay region and 1,812 students annually in the Mid-Peninsula Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0707.10 - Computer Programming 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 College of San Mateo and in the region.

Introduction

This report profiles Cloud Computing Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for a proposed new program at College of San Mateo.

Computer Systems Analysts (SOC 15-1121): Analyze science, engineering, business, and other data processing problems to implement and improve computer systems. Analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, workflow, and scheduling limitations. May analyze or recommend commercially available software.

Entry-Level Educational Requirement: Bachelor's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 21%

Database Administrators (SOC 15-1141): Administer, test, and implement computer databases, applying knowledge of database management systems. Coordinate changes to computer databases. May plan, coordinate, and implement security measures to safeguard computer databases. Excludes "Information Security Analysts" (15-1122).

Entry-Level Educational Requirement: Bachelor's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 21%

Network and Computer Systems Administrators (SOC 15-1142): Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Monitor network to ensure network availability to all system users and may perform necessary maintenance to support network availability. May monitor and test Web site performance to ensure Web sites operate correctly and without interruption. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software. May supervise computer user support specialists and computer network support specialists. May administer network security measures. Excludes "Information Security Analysts" (15-1122), "Computer User Support Specialists" (15-1151), and "Computer Network Support Specialists" (15-1152).

Entry-Level Educational Requirement: Bachelor's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 38%

Occupational Demand

Table 1. Employment Outlook for Cloud Computing Occupations in Bay Region

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Annual Openings	10% Hourly Wage	Median Hourly Wage
Computer Systems Analysts	32,292	36,023	3,731	12%	2,888	2,123	\$33.25	\$53.21
Database Administrators	4,852	5,528						

Source: EMSI 2018.4

Table 6. Top Employers Posting Cloud Computing Jobs
(Jan. 2018 | Dec. 2018)

Employer	Bay Area	Employment
Google Inc.	278	Wipro
Accenture	244	Capgemini
Apple Inc.	231	Infoobjects
Cisco Systems Incorporated	166	Mumba Techn
Capital Markets Placement	162	Flexton Corpora
Scoop Technologies	150	Codeforce 360
Deloitte	129	University Californ
IBM	129	Republic Bancorp
Facebook	125	Vdart, Inc
Techfetch Com	125	Diverse Lynx
Matchpoint Solutions Incorporated	124	Microsoft Corporation
Wells Fargo	120	Xoriant
Vmware Incorporated	104	K Anand Corporation

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 6,107 annual openings for the Cloud Computing occupational cluster and 566 annual awards for an annual undersupply of 5,541 students. In the Mid-Peninsula Sub-Region, there is also a gap with 1,927 annual openings and 115 annual awards for an annual undersupply of 1,812 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0707.10 - Computer Programming

2015-16	Bay (All CTE Programs)	College of San Mateo (All CTE Programs)	State (0707.10)	Bay (0707.10)	Mid- Peninsula (0707.10)	College of San Mateo (0707.10)
% Employed Four Quarters After Exit	74%	73%	63%	65%	67%	68%
Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$24,257	\$21,930	\$27,905	\$32,26679	

Project Management Certification	304	VMware Certified Professional (VCP)	71
Cisco Certified Network Associate (CCNA)	284		

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