

Entrepreneurship and Management Occupations Labor Market Information Report Berkeley 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 a significant undersupply of Entrepreneurship and Management 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 9,904 students in the Bay region and 2,428 students in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0506.40 - Small Business and Entrepreneurship 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 compared to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Berkeley City College and in the region.

Introduction

This report profiles Entrepreneurship and Management Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Berkeley City College. Labor market information (LMI) is not available at the eight-digit SOC Code level for Information Technology Project Managers (15-1199.09), therefore, the data shown in Tables 1 and 2 is for Computer Occupations, All Other (at the six digit SOC level) and likely overstates demand for Information Technology Project Managers. Similarly, LMI is not available at the eight-digit SOC Code level for Storage and Distribution Managers (11-3071.02), therefore, the data shown in Tables 1 and 2 is for Transportation, Storage and Distribution Managers (at the six digit SOC level) and likely overstates demand for Storage and Distribution Managers. Tables 3, 4, 6, 9, 10 and 11 use job postings data from Burning Glass at the eight-digit SOC Code level for both Information Technology Project Managers (15-1199.09) and Storage and Distribution Managers (11-3071.02).

- **First-Line Supervisors of Office and Administrative Support Workers (SOC 43-1011):** Directly supervise and coordinate the activities of clerical and administrative support workers.
Entry-Level Educational Requirement: High school *diploma or equivalent*
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: 39%
- **Transportation, Storage, and Distribution Managers (SOC 11-3071):** Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers.
Entry-Level Educational Requirement: High school *diploma or equivalent*
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: 36%
- **Administrative Services Managers (SOC 11-3011):** Plan, direct, or coordinate one or more administrative services of an organization, such as records and information management, mail distribution, facilities planning and maintenance, custodial operations, and other office support services. Medical records administrators are included in "Medical and Health Services Managers" (11-9111). Excludes "Purchasing Managers" (11-3061).
Entry-Level Educational Requirement: Bachelor's *degree*

Training Requirement: None

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

- **Computer Occupations, All Other (SOC 15-1199):** All computer occupations not listed separately. Excludes “Computer and Information Systems Managers” (11-3021), “Computer Hardware Engineers” (17-2061), “Electrical and Electronics Engineers” (17-2070), “Computer Science Teachers, Postsecondary” (25-1021), “Multimedia Artists and Animators” (27-1014), “Graphic Designers” (27-1024), “Computer Operators” (43-9011), and “Computer, Automated Teller, and Office Machine Repairs” (49-2011).

Entry-Level Educational Requirement: Bachelor's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 35%

- **First-Line Supervisors of Production and Operating Workers (SOC 51-1011):** Directly supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Excludes team or work leaders.

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 34%

Occupational Demand

Table 1. Employment Outlook for Entrepreneurship and Management Occupations in Bay Region

Occupation	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	5-Yr Total Openings	Annual Openings	10% Hourly Wage	Median Hourly Wage
First-Line Supervisors of Office and Administrative Support Workers	38,459	40,325	1,865	5%	21,001	4,200	\$19.34	\$30.80
Transportation, Storage, and Distribution Managers	4,685	4,886	201	4%	2,006	401	\$31.42	\$53.94
Administrative Services Managers	10,956	11,727	771	7%	5,255	1,051	\$34.00	\$58.26
Computer Occupations, All Other	34,129	37,296	3,168	9%	14,979	2,996	\$30.64	\$55.84
First-Line Supervisors of Production and Operating Workers	11,519	12,356	837	7%	6,597	1,319	\$19.01	\$33.18
Total	99,747	106,589	6,842	7%	49,838	9,968	\$25.34	\$43.74

Source: EMSI 2019.2

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 Entrepreneurship and Management Occupations in East Bay Sub-Region

Occupation	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	5-Yr Total Openings	Annual Openings	10% Hourly Wage	Median Hourly Wage
First-Line Supervisors of Office and Administrative Support Workers	10,905	11,175	270	2%	5,632	1,126	\$18.26	\$28.43
Transportation, Storage, and Distribution Managers	1,607	1,673	66	4%	683	137	\$29.42	\$51.94
Administrative Services Managers	2,981	3,122	142	5%	1,347	269	\$31.03	\$53.18

Computer Occupations, All Other	6,570	6,710	140	2%	2,334	467	\$26.26	\$46.42
First-Line Supervisors of Production and Operating Workers	3,755	4,151	396	11%	2,300	460	\$17.79	\$32.72
TOTAL	25,817	26,832	1,014	4%	12,296	2,459	\$22.40	\$37.95

Source: EMSI 2019.2

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 (August 2018 - July 2019)

Occupation	Bay Region	East Bay
Information Technology Project Managers	15,522	2,592
First-Line Supervisors of Office and Administrative Support Workers	11,324	2,287
Administrative Services Managers	5,026	1,223
First-Line Supervisors of Production and Operating Workers	1,919	748
Storage and Distribution Managers	1,139	498
Total	34,930	7,348

Source: Burning Glass

Table 4a. Top Job Titles for Entrepreneurship and Management Occupations for latest 12 months (August 2018 - July 2019) Bay Region

Common Title	Bay	Common Title	Bay
Office Manager	2,603	Technology Manager	374
Customer Manager	1,485	Warehouse Supervisor	338
Technical Project Manager	1,080	Front Office Manager	311
Information Technology Project Manager	1,048	Administrative Manager	272
Facilities Manager	1,045	Infrastructure Project Manager	263
Information Technology Manager	959	Information Technology Program Manager	248
Project Manager	792	Director of Facilities	227
Facilities Coordinator	633	Assistant Office Manager	212
Production Supervisor	599	Customer Service Supervisor	206
Payroll Manager	515	Associate Director	203
Scrum Master	502	Accounts Payable Manager	201
Customer Service Manager	478	Front Office Supervisor	198
Technical Lead	437	Administrative Analyst	185
Warehouse Manager	432	Distribution Manager	181

Table 4b. Top Job Titles for Entrepreneurship and Management Occupations for latest 12 months (August 2018 - July 2019) East Bay Sub-Region

Common Title	East Bay	Common Title	East Bay
Office Manager	596	Manufacturing Supervisor	70
Production Supervisor	279	Technical Lead	69
Facilities Manager	250	Customer Service Supervisor	66
Information Technology Project Manager	225	Distribution Manager	63
Technical Project Manager	211	Associate Director	61
Warehouse Manager	209	Administrative Manager	60
Information Technology Manager	198	Front Office Manager	52
Warehouse Supervisor	159	Business Office Manager	52
Customer Manager	156	Accounts Payable Manager	50
Facilities Coordinator	138	Director of Facilities	48
Customer Service Manager	137	Technology Manager	47
Project Manager	134	Plant Manager	47
Payroll Manager	122	Administrative Officer	45

Scrum Master	85	Infrastructure Project Manager	44
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Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Entrepreneurship and Management Workers in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2023)	% Change (2019-23)	% in Industry (2018)
Custom Computer Programming Services (541511)	7,970	8,878	11.4%	8.0%
Computer Systems Design Services (541512)	4,718	5,107	8.2%	4.7%
Corporate, Subsidiary, and Regional Managing Offices (551114)	4,034	4,275	6.0%	4.0%
Local Government, Excluding Education and Hospitals (903999)	3,753	3,880	3.4%	3.8%
Internet Publishing and Broadcasting and Web Search Portals (519130)	3,674	4,825	31.3%	3.7%
Software Publishers (511210)	2,800	3,274	16.9%	2.8%
Federal Government, Civilian, Excluding Postal Service (901199)	2,404	2,348	(2.3%)	2.4%
Data Processing, Hosting, and Related Services (518210)	2,201	2,784	26.5%	2.2%
Supermarkets and Other Grocery (except Convenience) Stores (445110)	1,495	1,581	5.8%	1.5%
Commercial Banking (522110)	1,412	1,163	(17.6%)	1.4%
Electronic Computer Manufacturing (334111)	1,374	1,444	5.1%	1.4%
Offices of Physicians (except Mental Health Specialists) (621111)	1,324	1,329	0.4%	1.3%
General Medical and Surgical Hospitals (622110)	1,226	1,176	(4.1%)	1.2%
Hotels (except Casino Hotels) and Motels (721110)	1,214	1,225	0.9%	1.2%
Other Computer Related Services (541519)	1,161	1,360	17.1%	1.2%
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715)	1,136	1,085	(4.5%)	1.1%
Colleges, Universities, and Professional Schools (State Government) (902612)	1,055	998	(5.4%)	1.1%
Offices of Dentists (621210)	1,001	1,094	9.3%	1.0%
Custom Computer Programming Services (541511)	7,970	8,878	11.4%	8.0%
Computer Systems Design Services (541512)	4,718	5,107	8.2%	4.7%
Corporate, Subsidiary, and Regional Managing Offices (551114)	4,034	4,275	6.0%	4.0%
Local Government, Excluding Education and Hospitals (903999)	3,753	3,880	3.4%	3.8%

Source: EMSI 2019.2

Table 6. Top Employers Posting Entrepreneurship and Management Occupations in Bay Region and East Bay Sub-Region (August 2018 - July 2019)

Employer	Bay	Employer	Bay	Employer	East Bay
Cisco Systems Incorporated	297	Walmart / Sam's	108	University Of California Berkeley	113
H&R Block	242	Jones Lang Lasalle Incorporated	105	University California	94
Infosys	209	Amazon	102	Kaiser Permanente	87
Marriott International Incorporated	202	Visa	98	H&R Block	83
Apple Inc.	187	Salesforce	88	Uc San Diego	79
University California	180	Aramark	86	Workday, Inc	72
Target	179	Sfmta	85	Target	62
Stanford University	177	Workday, Inc	83	Safeway Incorporated	35
Google Inc.	151	Uc San Diego	79	Lawrence Livermore National Laboratory	34

Wipro	145	Microsoft Corporation	79	Bio-Rad Laboratories	34
Cynet Systems Inc	145	Anthem Blue Cross	76	Marriott International Incorporated	33
Accenture	143	Cushman & Wakefield	75	Albertsons	30
Facebook	131	Gilead Sciences	74	Tesla	29
Kaiser Permanente	127	Wells Fargo	72	Tesla Motors	28
University Of California Berkeley	120	Deloitte	72	Infosys	26
cbre	116	Republic Bancorp	71	Aramark	26
IBM	116	City and County of San Francisco	70	Ross Stores	25

Source: Burning Glass

Educational Supply

There are 15 community colleges in the Bay Region issuing 64 awards on average annually (last 3 years) on TOP 0506.40 - Small Business and Entrepreneurship. There are six colleges in the East Bay Sub-Region issuing 31 awards on average annually (last 3 years) on this TOP code.

Table 7. Awards on TOP 0506.40 - Small Business and Entrepreneurship in Bay Region

College	Sub-Region	Associates	Certificates	Noncredit	Total
Alameda	East Bay		2		2
Canada	Mid-Peninsula	1	1		2
Chabot	East Bay	6	3		9
DeAnza	Silicon Valley		4		4
Diablo Valley	East Bay		5		5
Las Positas	East Bay	4	1		5
Los Medanos	East Bay	4	2		6
Merritt	East Bay		4		4
Monterey	Santa Cruz & Monterey	1			1
San Francisco Centers	Mid-Peninsula			6	6
San Jose City	Silicon Valley	2	3		5
Santa Rosa	North Bay		12		12
Skyline	Mid-Peninsula		1		1
Solano	North Bay	1			1
West Valley	Silicon Valley		1		1
Total Bay Region		19	39	6	64
Total East Bay Sub-Region		14	17	-	31

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 9,968 annual openings for the Entrepreneurship and Management occupational cluster and 64 annual (3-year average) awards for an annual undersupply of 9,904 students. In the East Bay Sub-Region, there is also a gap with 2,459 annual openings and 31 annual (3-year average) awards for an annual undersupply of 2,428 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0506.40 - Small Business and Entrepreneurship

2015-16	Bay (All CTE Programs)	Berkeley City College (All CTE Programs)	State (0506.40)	Bay (0506.40)	East Bay (0506.40)	Berkeley City College (0506.40)
% Employed Four Quarters After Exit	74%	54%	57%	65%	68%	n/a
Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$7,380	\$7,378	\$9,880	\$10,080	n/a
Median % Change in Earnings	46%	38%	45%	51%	13%	n/a
% of Students Earning a Living Wage	63%	45%	53%	64%	64%	n/a

Source: Launchboard Pipeline (version available on 8/14/19)

Skills, Certifications and Education

Table 9. Top Skills for Entrepreneurship and Management Occupations in Bay Region (August 2018 - July 2019)

Skill	Postings	Skill	Postings	Skill	Postings
Project Management	11,061	Onboarding	2,185	Change Management	1,589
Budgeting	7,977	Quality Assurance and Control	2,093	Customer Billing	1,588
Scheduling	6,794	Repair	2,069	Oracle	1,542
Customer Service	5,363	Atlassian JIRA	1,929	Key Performance Indicators (KPIs)	1,532
Staff Management	3,570	Software as a Service (SaaS)	1,922	Sales	1,498
Scrum	3,530	Stakeholder Management	1,847	Account Management	1,482
Office Management	3,339	Business Process	1,775	SAP	1,477
Software Development	3,029	Salesforce	1,729	Java	1,437
Project Planning and Development Skills	2,913	Product Management	1,727	Quality Management	1,350
Customer Contact	2,361	Supervisory Skills	1,701	Conflict Management	1,340
Accounting	2,222	SQL	1,649	Facility Management	1,337
Scrum Master	2,187	Process Improvement	1,591	E-Commerce	1,314

Source: Burning Glass

Table 10. Certifications for Entrepreneurship and Management Occupations in Bay Region (August 2018 - July 2019)

Note: 80% 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
Project Management Certification	2,634	First Aid Cpr Aed	139
Project Management Professional (PMP)	1,787	Certified Facility Manager (CFM)	123
Driver's License	1,636	Certified Information Systems Security Professional (CISSP)	114
Certified ScrumMaster (CSM)	1,053	Security Clearance	102
IT Infrastructure Library (ITIL) Certification	527	Certified Information Systems Auditor (CISA)	100
ITIL Certification	221	Six Sigma Certification	88
Agile Certification	206	Certified Information Security Manager (CISM)	69
Certified Scrum Professional (CSP)	186	PMI Certified Associate in Project Management (CAPM)	64

Certified Payroll Professional (CPP)	177	Cisco Certified Network Associate (CCNA)	62
PMI Agile Certified Practitioner (PMI-ACP)	163	Program Management Professional (PgMP)	61
Forklift Operator Certification	162	Phlebotomy Certification	56
Certified Protection Professional (CPP)	153	Series 7	53
Certified Payroll Professional (CPP)	177	Cisco Certified Network Associate (CCNA)	62

Source: Burning Glass

Table 11. Education Requirements for Entrepreneurship and Management Occupations in Bay Region

Note: 42% 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	2,915	15%
Associate Degree	861	4%
Bachelor's Degree or Higher	15,427	81%

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/
 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, 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