

# Program Market Demand

4 Programs

Emsi Q3 2018 Data Set

September 2018

College of San Mateo



3401 CSM Drive  
San Mateo, California 94402  
650.358.6880

# Parameters

## Programs

Code	Description
15.1301	Drafting and Design Technology/Technician, General
15.1303	Architectural Drafting and Architectural CAD/CADD
15.1304	Civil Drafting and Civil Engineering CAD/CADD
50.0410	Illustration

## Regions

Code	Description
6001	Alameda County, CA
6013	Contra Costa County, CA
6075	San Francisco County, CA
6081	San Mateo County, CA
6085	Santa Clara County, CA

## Education Levels

Any

## Completions Year

2015

## Jobs Timeframe

2017 - 2024

## Job Postings Timeframe

Sep 2016 - Aug 2018

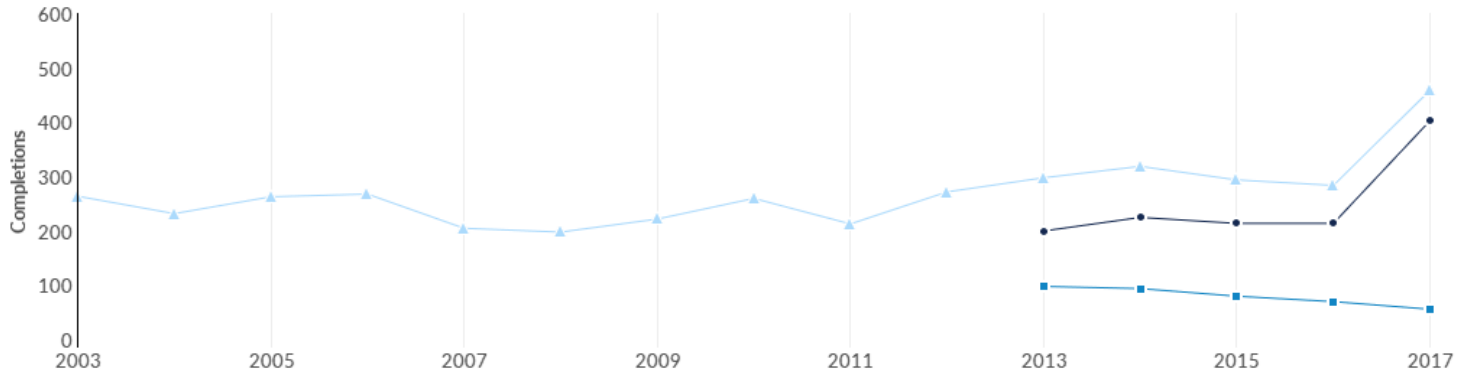
# Program Overview



	Completions (2015)	% Completions	Institutions (2015)	% Institutions
● All Programs	294	100%	9	100%
● Distance Offered Programs	214	73%	1	11%
● Non-Distance Offered Programs	80	27%	8	89%

Institution	Completions (2015)	Growth % YOY (2015)	Market Share (2015)
Academy of Art University	214	-1.4%	72.8%
California College of the Arts	41	10.8%	13.9%
City College of San Francisco	13	-40.9%	4.4%
College of San Mateo	8	700.0%	2.7%
Diablo Valley College	7	-41.7%	2.4%
ITT Technical Institute-Oakland	4	300.0%	1.4%
ITT Technical Institute-Concord	3	50.0%	1.0%
West Valley College	2	-81.8%	0.7%
Gavilan College	2	Insf. Data	0.7%

# Regional Trends



	2013 Completions	2015 Completions	% Change
● Distance Offered Programs	200	214	+7.0%
■ Non-Distance Offered Programs	98	80	-18.4%
▲ All Programs	298	294	-1.3%

# Job Postings vs. Hires

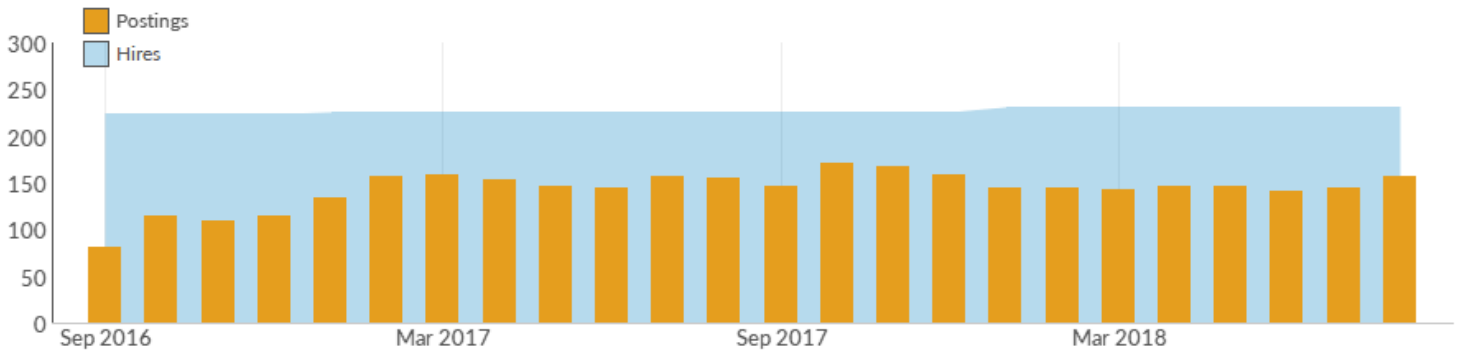
143

Avg. Monthly Postings (Sep 2016 - Aug 2018)

228


Avg. Monthly Hires (Sep 2016 - Aug 2018)

In an average month, there were 143 unique job postings for 5 Occupations, and 228 actually hired. This means there were approximately 2 hires for 5 Occupations for every 1 unique job posting.



Occupation	Avg Monthly Postings (Sep 2016 - Aug 2018)	Avg Monthly Hires (Sep 2016 - Aug 2018)
Architectural and Civil Drafters	129	153
Set and Exhibit Designers	13	29
Artists and Related Workers, All Other	1	4
Drafters, All Other	0	20
Designers, All Other	0	0

## Job Postings Summary

<p><b>1,169</b> Unique Postings 5,024 Total Postings</p>	<p><b>4 : 1</b> Posting Intensity</p>  <p>Regional Average: 4 : 1</p>	<p><b>32 days</b> Median Posting Duration Regional Average: 33 days</p>
--	--	---

There were 5,024 total job postings for your selection from September 2016 to August 2018, of which 1,169 were unique. These numbers give us a Posting Intensity of 4-to-1, meaning that for every 4 postings there is 1 unique job posting.

This is close to the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that they are putting average effort toward hiring for this position.

## Target Occupations

<p><b>5,383</b> Jobs (2017) 46% <b>above</b> National average</p>	<p><b>+10.0%</b> % Change (2017-2024) Nation: <b>+6.7%</b></p>	<p><b>\$29.08/hr</b> Median Hourly Earnings Nation: \$24.99/hr</p>	<p><b>564</b> Annual Openings</p>
---	--	--	---------------------------------------

Occupation	2017 Jobs	Annual Openings	Median Hourly Earnings	Growth (2017 - 2024)	Location Quotient (2017)
Architectural and Civil Drafters	3,794	403	\$29.76/hr	<b>+11.91%</b>	1.57
Set and Exhibit Designers	489	52	\$23.80/hr	<b>+7.98%</b>	1.43
Designers, All Other	489	48	\$32.33/hr	<b>+2.25%</b>	1.90
Drafters, All Other	410	43	\$27.90/hr	<b>+10.73%</b>	1.01
Artists and Related Workers, All Other	201	18	\$13.13/hr	<b>-2.49%</b>	0.77

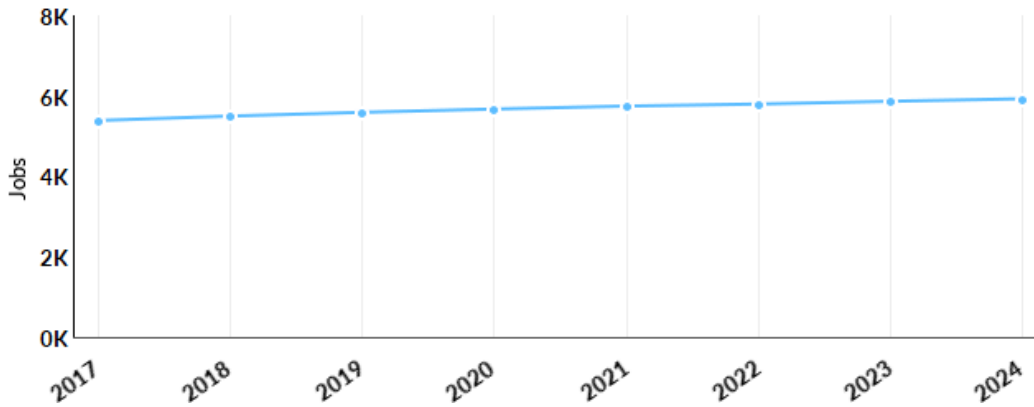
# Growth

5,383  
2017 Jobs

5,923  
2024 Jobs

540  
Change (2017-2024)

10.0%  
% Change (2017-2024)



Occupation	2017 Jobs	2024 Jobs	Change	% Change
Architectural and Civil Drafters (17-3011)	3,794	4,246	452	12%
Drafters, All Other (17-3019)	410	454	44	11%
Artists and Related Workers, All Other (27-1019)	201	196	-5	-2%
Set and Exhibit Designers (27-1027)	489	528	39	8%
Designers, All Other (27-1029)	489	500	11	2%

# Percentile Earnings

\$24.13/hr

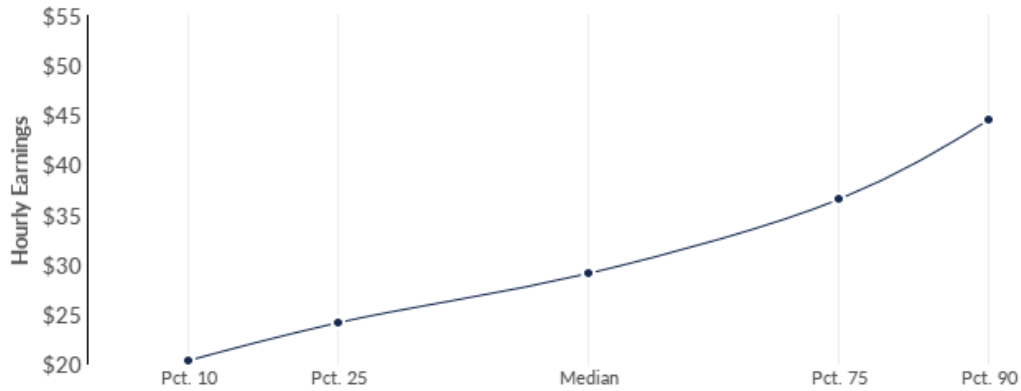
25th Percentile Earnings

\$29.08/hr

Median Earnings

\$36.52/hr

75th Percentile Earnings



Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Architectural and Civil Drafters (17-3011)	\$25.18	\$29.76	\$36.19
Drafters, All Other (17-3019)	\$24.17	\$27.90	\$34.87
Artists and Related Workers, All Other (27-1019)	\$10.51	\$13.13	\$35.00
Set and Exhibit Designers (27-1027)	\$19.54	\$23.80	\$33.23
Designers, All Other (27-1029)	\$24.65	\$32.33	\$48.98



# Top Companies Posting

Company	Total/Unique (Sep 2016 - Aug 2018)	Posting Intensity	Median Posting Duration
Aerotek, Inc.	658 / 73	9 : 1	19 days
Gensler	575 / 48	12 : 1	72 days
Cybercoders, Inc.	181 / 37	5 : 1	23 days
Skidmore, Owings & Merrill LLP	28 / 17	2 : 1	29 days
Aquent LLC	28 / 16	2 : 1	9 days
Cupertino Electric, Inc.	42 / 16	3 : 1	29 days
AppleOne	23 / 11	2 : 1	17 days
Mashable	192 / 11	17 : 1	46 days
Design-Build Institute of America	23 / 10	2 : 1	219 days
Onward Search Inc	15 / 10	2 : 1	177 days
RANDSTAD HOLDING nv	44 / 10	4 : 1	32 days
AIA East Bay A Chapter of The American Institute of Architects	9 / 9	1 : 1	349 days
Acco Engineered Systems, Inc.	39 / 9	4 : 1	79 days
Aecom	59 / 9	7 : 1	30 days
Creative Circle LLC	24 / 9	3 : 1	30 days
Hok Group, Inc	75 / 9	8 : 1	72 days
Jacobs Engineering Group Inc.	36 / 9	4 : 1	33 days
Sutro Architects	29 / 9	3 : 1	75 days
Technipower, Inc	23 / 9	3 : 1	27 days
Architect	9 / 8	1 : 1	91 days
Carollo Engineers, Inc.	22 / 8	3 : 1	59 days
Modis, Inc.	19 / 8	2 : 1	12 days
ACCENTURE, INC.	59 / 7	8 : 1	29 days
Apple Inc.	23 / 7	3 : 1	45 days

H G A Incorporated	12 / 7	2 : 1		47 days
Management Recruiters International, Inc.	46 / 7	7 : 1		52 days
Peak Technical Inc.	10 / 7	1 : 1		13 days
Penn Technical Staffing, Inc.	16 / 7	2 : 1		17 days
RIs Inc	16 / 7	2 : 1		53 days
Rose International, Inc.	20 / 7	3 : 1		22 days
Siemens AG	12 / 7	2 : 1		11 days
Techcon, Inc.	20 / 7	3 : 1		45 days
Appliance Pro, LLC	26 / 6	4 : 1		52 days
City of San Mateo	7 / 6	1 : 1		26 days
Complete Project Solutions Inc.	11 / 6	2 : 1		59 days
Fire Detection Unlimited Inc	15 / 6	3 : 1		62 days
Giacalone Design Services, Inc.	10 / 6	2 : 1		32 days
Uber Technologies, Inc.	11 / 6	2 : 1		14 days
Advanced Employment Services, Inc	163 / 5	33 : 1		49 days
California Building Industry Association	12 / 5	2 : 1		158 days
Cordev Corporation	6 / 5	1 : 1		36 days
HI Etech Inc	154 / 5	31 : 1		49 days
K P W Structural Engineers, Inc	8 / 5	2 : 1		7 days
LPA, Inc.	8 / 5	2 : 1		6 days
Lam Research Corporation	8 / 5	2 : 1		89 days
Robert Half International Inc.	13 / 5	3 : 1		17 days
Tesla Motors, Inc.	16 / 5	3 : 1		55 days
Apple Associates Inc	5 / 4	1 : 1		78 days
Astreya Partners, Inc.	9 / 4	2 : 1		32 days
Building Tomorrow's Talent, LLC	9 / 4	2 : 1		62 days

# Top Posted Job Titles

Job Title	Total/Unique (Sep 2016 - Aug 2018)	Posting Intensity	Median Posting Duration
Drafter	1,324 / 309	4 : 1	31 days
Architectural Designer	1,160 / 150	8 : 1	47 days
Design Engineer (Architecture and Engineering)	311 / 100	3 : 1	31 days
CAD Technician	455 / 96	5 : 1	39 days
Presentation Specialist	120 / 61	2 : 1	26 days
Designer Drafter	94 / 46	2 : 1	23 days
Computer Aided Design (CAD) Designer	86 / 29	3 : 1	32 days
Architectural Assistant	40 / 26	2 : 1	30 days
Engineering Intern	88 / 18	5 : 1	43 days
CAD Engineer	45 / 17	3 : 1	16 days
Designer	147 / 17	9 : 1	42 days
Interior Designer	63 / 13	5 : 1	46 days
Drafting Designer	17 / 12	1 : 1	21 days
Draftsperson	16 / 11	1 : 1	16 days
Technical Designer	26 / 10	3 : 1	31 days
Adjunct Instructor	18 / 8	2 : 1	49 days
Computer Aided Design	27 / 8	3 : 1	44 days
Plumbing Foreman	214 / 8	27 : 1	69 days
Architect	12 / 7	2 : 1	31 days
Technical Instructor	15 / 7	2 : 1	29 days
Presenter	11 / 6	2 : 1	19 days
Survey Party Chief	39 / 6	7 : 1	52 days
Architectural Technician	163 / 5	33 : 1	49 days
Architectural Technologist	11 / 5	2 : 1	47 days

CNC Machinist	5 / 5	1 : 1		11 days
Entry Level Electrical Engineer	21 / 5	4 : 1		32 days
Automotive Detailer	12 / 4	3 : 1		58 days
Graphic Designer	6 / 4	2 : 1		31 days
Process Development Scientist	10 / 4	3 : 1		75 days
Process Specialist	10 / 4	3 : 1		32 days
Software Engineer	11 / 4	3 : 1		12 days
Teacher Aide	57 / 4	14 : 1		126 days
Technical Architect	19 / 4	5 : 1		139 days
Civil Engineer	7 / 3	2 : 1		69 days
Construction Manager	4 / 3	1 : 1		15 days
Construction Supervisor	13 / 3	4 : 1		62 days
Field Technician (Architecture and Engineering)	14 / 3	5 : 1		38 days
HVAC Refrigeration Technician	6 / 3	2 : 1		3 days
Project Coordinator (Architecture and Engineering)	5 / 3	2 : 1		4 days
Project Engineer (Architecture and Engineering)	17 / 3	6 : 1		16 days
Spanish Translator	5 / 3	2 : 1		38 days
Structural Engineer	3 / 3	1 : 1		17 days
Visual Designer	5 / 3	2 : 1		36 days
Building Engineer	4 / 2	2 : 1		11 days
Construction Engineer	12 / 2	6 : 1		6 days
Data Center Technician	2 / 2	1 : 1		3 days
Educator	2 / 2	1 : 1		8 days
Engineering Assistant	4 / 2	2 : 1		31 days
Environmental Engineer	9 / 2	5 : 1		14 days

---

Graduate Assistant

6 / 2

3 : 1



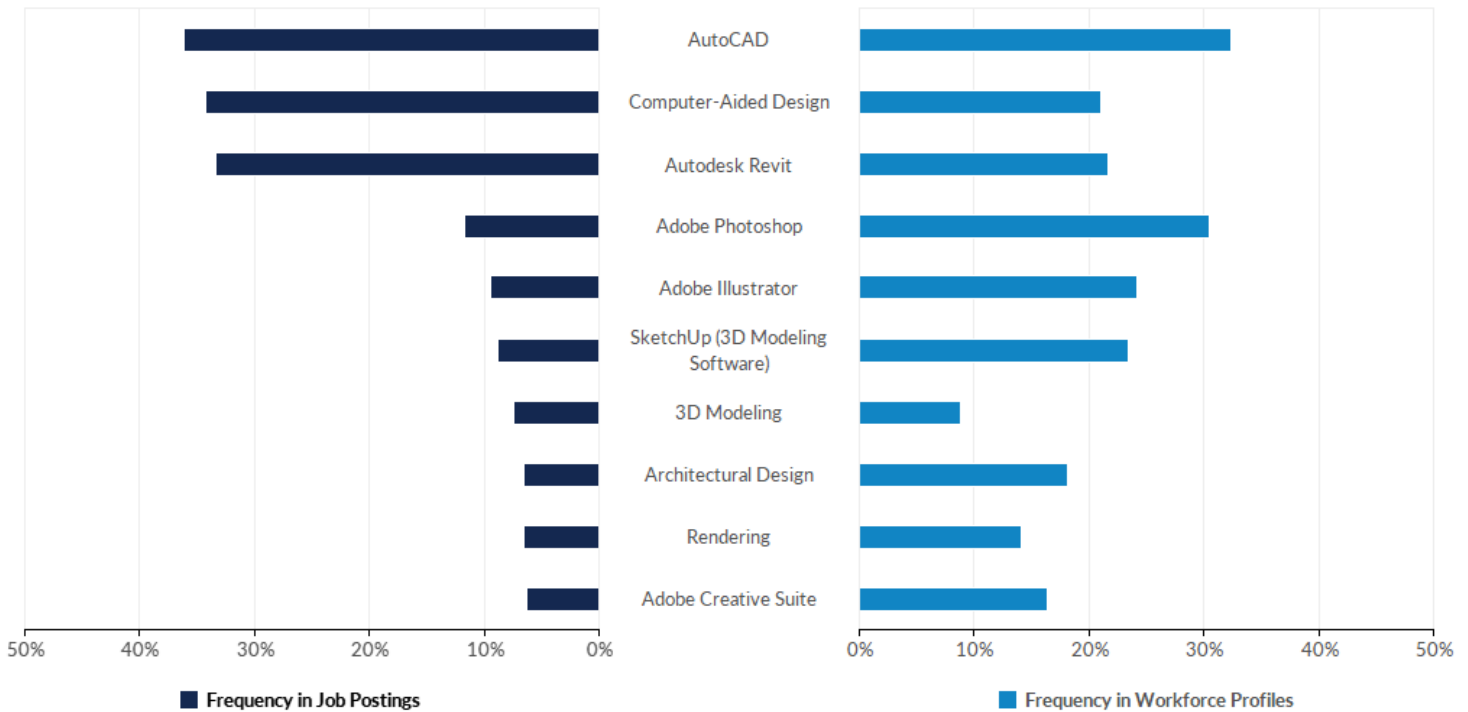
39 days

---

The following provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Along with Emsi's job posting analytics, this comparison leverages Emsi's dataset of more than 100M online resumés and profiles. All resumés and profiles used in these comparisons have been updated within the last three years.

\*The skills associated with workforce profiles represent workers of all education and experience levels.

## Top Hard Skills



## Top Hard Skills

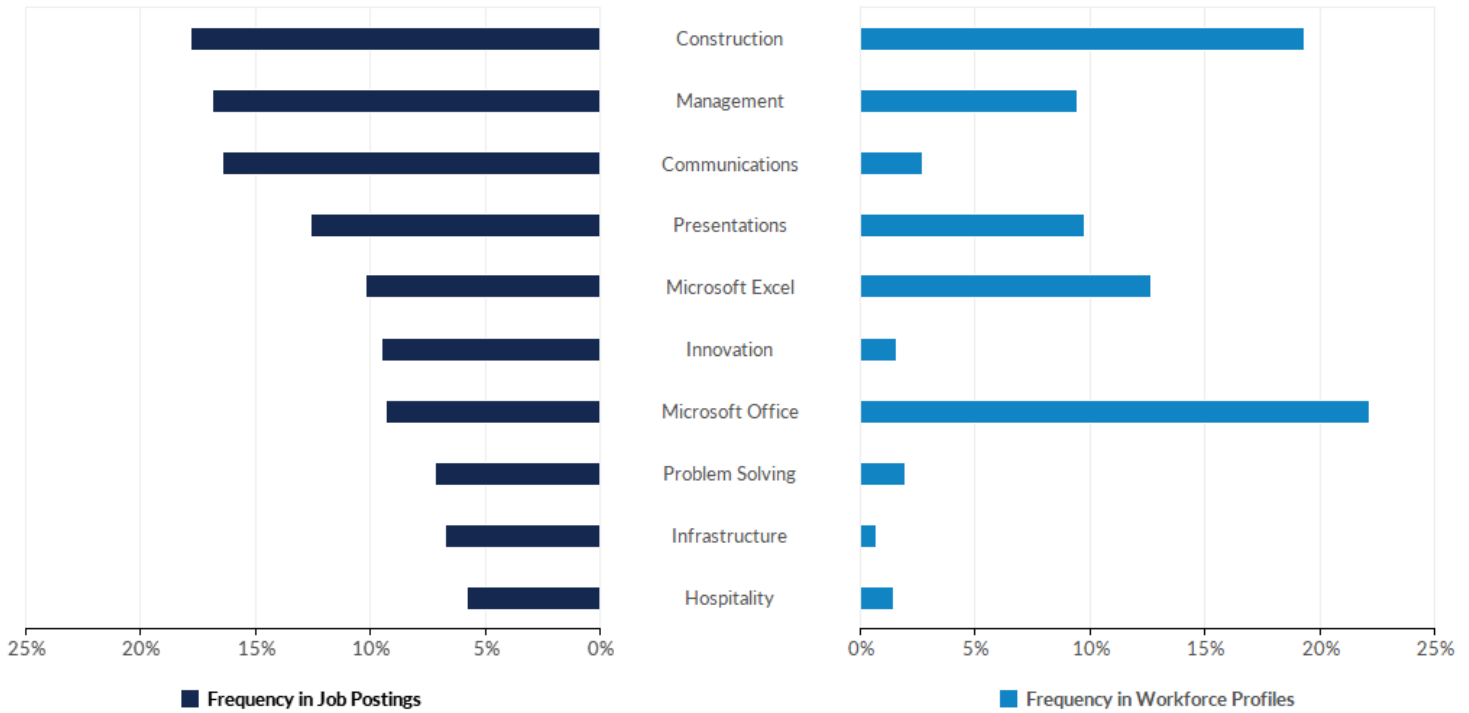
Skill	Frequency in Postings	Postings with Skill / Total Postings (Sep 2016 - Aug 2018)	Frequency in Profiles	Profiles with Skill / Total Profiles (2016 - 2018)
AutoCAD	36%	422 / 1,169	32%	572 / 1,766
Computer-Aided Design	34%	401 / 1,169	21%	371 / 1,766
Autodesk Revit	33%	390 / 1,169	22%	383 / 1,766
Adobe Photoshop	12%	137 / 1,169	31%	539 / 1,766
Adobe Illustrator	9%	111 / 1,169	24%	426 / 1,766
SketchUp (3D Modeling Software)	9%	103 / 1,169	23%	413 / 1,766
3D Modeling	7%	87 / 1,169	9%	156 / 1,766

Architectural Design	7%	77 / 1,169	18%	320 / 1,766
Rendering	7%	77 / 1,169	14%	250 / 1,766
Adobe Creative Suite	6%	73 / 1,169	16%	289 / 1,766
Adobe InDesign	6%	73 / 1,169	19%	336 / 1,766
Elevation	6%	72 / 1,169	4%	70 / 1,766
Rhino	6%	68 / 1,169	10%	173 / 1,766
Sketching	5%	57 / 1,169	15%	262 / 1,766
Drawing	5%	56 / 1,169	0%	0 / 1,766
Graphic Design	5%	56 / 1,169	11%	196 / 1,766
Architectural Drawing	5%	55 / 1,169	11%	193 / 1,766
Professional Services	4%	48 / 1,169	0%	0 / 1,766
HVAC	4%	44 / 1,169	1%	25 / 1,766
Building Design	4%	41 / 1,169	0%	7 / 1,766
Aviation	3%	40 / 1,169	0%	3 / 1,766
Floor Planning	3%	40 / 1,169	3%	61 / 1,766
Plumbing	3%	39 / 1,169	1%	25 / 1,766
Autodesk 3DS Max (3D Graphics Software)	3%	36 / 1,169	7%	119 / 1,766
Urban Design	3%	36 / 1,169	5%	90 / 1,766
MicroStation	3%	35 / 1,169	2%	35 / 1,766
Submittals (Construction)	3%	32 / 1,169	10%	168 / 1,766
Alarm Devices	3%	30 / 1,169	0%	0 / 1,766
Engineering Design Process	2%	29 / 1,169	1%	9 / 1,766
Fire Alarm Systems	2%	29 / 1,169	0%	0 / 1,766
Furnishing	2%	29 / 1,169	5%	92 / 1,766
Space Planning	2%	29 / 1,169	6%	109 / 1,766
Renovation	2%	28 / 1,169	6%	108 / 1,766

SolidWorks (CAD)	2%	27 / 1,169	4%	72 / 1,766
Accounting	2%	26 / 1,169	1%	16 / 1,766
Civil Engineering	2%	26 / 1,169	2%	40 / 1,766
Microsoft Access	2%	26 / 1,169	1%	20 / 1,766
Product Quality Assurance	2%	25 / 1,169	1%	14 / 1,766
Building Information Modeling	2%	24 / 1,169	5%	91 / 1,766
Sustainable Design	2%	24 / 1,169	12%	212 / 1,766
Telecommunications	2%	24 / 1,169	1%	11 / 1,766
Automation	2%	23 / 1,169	1%	10 / 1,766
Construction Management	2%	23 / 1,169	4%	71 / 1,766
Structural Engineering	2%	22 / 1,169	1%	22 / 1,766
Low Voltage	2%	21 / 1,169	0%	0 / 1,766
Geographic Information Systems	2%	19 / 1,169	1%	19 / 1,766
Visualization	2%	19 / 1,169	3%	47 / 1,766
Conceptualization	2%	18 / 1,169	0%	5 / 1,766
Civil Designer	1%	17 / 1,169	0%	6 / 1,766
QuarkXPress Design Software	1%	17 / 1,169	1%	18 / 1,766



## Top Common Skills



## Top Common Skills

Skill	Frequency in Postings	Postings with Skill / Total Postings (Sep 2016 - Aug 2018)	Frequency in Profiles	Profiles with Skill / Total Profiles (2016 - 2018)
Construction	18%	208 / 1,169	19%	341 / 1,766
Management	17%	197 / 1,169	9%	167 / 1,766
Communications	16%	192 / 1,169	3%	48 / 1,766
Presentations	13%	147 / 1,169	10%	172 / 1,766
Microsoft Excel	10%	119 / 1,169	13%	224 / 1,766
Innovation	9%	111 / 1,169	2%	28 / 1,766
Microsoft Office	9%	109 / 1,169	22%	391 / 1,766
Problem Solving	7%	84 / 1,169	2%	35 / 1,766
Infrastructure	7%	79 / 1,169	1%	12 / 1,766
Hospitality	6%	68 / 1,169	1%	26 / 1,766
Microsoft Outlook	5%	64 / 1,169	2%	35 / 1,766
Microsoft PowerPoint	5%	60 / 1,169	10%	185 / 1,766

Research	5%	59 / 1,169	14%	253 / 1,766
Verbal Communication Skills	5%	56 / 1,169	0%	0 / 1,766
Written Communication	4%	50 / 1,169	0%	1 / 1,766
Coordinating	4%	49 / 1,169	3%	48 / 1,766
Leadership	4%	49 / 1,169	6%	111 / 1,766
Operations	4%	49 / 1,169	3%	58 / 1,766
Time Management	4%	47 / 1,169	2%	29 / 1,766
Creativity	4%	46 / 1,169	0%	0 / 1,766
Sales	3%	38 / 1,169	10%	174 / 1,766
Interpersonal Skills	3%	37 / 1,169	0%	3 / 1,766
Project Management	3%	34 / 1,169	6%	113 / 1,766
Writing	2%	26 / 1,169	3%	61 / 1,766
Computer Literacy	2%	25 / 1,169	0%	4 / 1,766
Microsoft Word	2%	24 / 1,169	10%	181 / 1,766
Office Suite	2%	24 / 1,169	0%	1 / 1,766
Information Technology	2%	23 / 1,169	1%	17 / 1,766
Customer Service	2%	20 / 1,169	10%	185 / 1,766
Integration	2%	20 / 1,169	1%	17 / 1,766
Mentorship	2%	20 / 1,169	0%	8 / 1,766
Microsoft Windows	2%	18 / 1,169	2%	27 / 1,766
Decision Making	1%	14 / 1,169	0%	3 / 1,766
Portable Document Format	1%	10 / 1,169	0%	5 / 1,766
Mathematics	1%	9 / 1,169	1%	24 / 1,766
Microsoft Office 2000	1%	9 / 1,169	0%	0 / 1,766
Proposal (Business)	1%	9 / 1,169	1%	17 / 1,766
Real Estates	1%	9 / 1,169	0%	8 / 1,766

Career Development	1%	8 / 1,169	0%	0 / 1,766
Computer Sciences	1%	8 / 1,169	0%	2 / 1,766
Financial Services	1%	8 / 1,169	0%	0 / 1,766
Business Acumen	1%	7 / 1,169	0%	0 / 1,766
Critical Thinking	1%	7 / 1,169	0%	5 / 1,766
Prioritization	1%	7 / 1,169	0%	7 / 1,766
Teaching	1%	7 / 1,169	6%	114 / 1,766
Trust	1%	7 / 1,169	0%	0 / 1,766
Word Processor	1%	7 / 1,169	0%	2 / 1,766
Listening Skills	1%	6 / 1,169	0%	0 / 1,766
Persuasive Communication	1%	6 / 1,169	0%	2 / 1,766
Program Management	1%	6 / 1,169	1%	25 / 1,766

## Top Qualifications

Qualification	Postings with Qualification
Professional Engineer	2
Advanced Life Support	1
Licensed Professional Engineer	1

# Appendix A - Data Sources and Calculations

## Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

## Emsi Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

## Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

## Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

## State Data Sources

This report uses state data from the following agencies: California Labor Market Information Department