



Web Design Occupations Labor Market Information Report Cabrillo College

**Prepared by the San Francisco Bay Center of Excellence for Labor Market Research
November 2021**

Recommendation

Based on all available data, there appears to be an “undersupply” of Web Design workers compared to the demand for this cluster of occupations in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito, Santa Cruz counties). There is a projected annual gap of about 1,293 students in the Bay region and 210 students in the SC-Monterey Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0614.30 Website Design and Development 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 Cabrillo College and in the region.

This report profiles Web Design Occupations in the 12 county Bay region and in the SC-Monterey sub-region for two proposed new programs at Cabrillo College: Web Design Certificate of Achievement and UI/UX Design Certificate of Achievement. This report can be used when submitting to BACCC for both programs because the TOP code and SOC code are the same for both programs.

- Web Developers and Digital Interface Designers (15-1257):** Design, create, and modify Web sites. Analyze user needs to implement Web site content, graphics, performance, and capacity. May integrate Web sites with other computer applications. May convert written, graphic, audio, and video components to compatible Web formats by using software designed to facilitate the creation of Web and multimedia content. Excludes “Multimedia Artists and Animators” (27-1014).

Entry-Level Educational Requirement: Associate’s degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 26%

Occupational Demand

Table 1. Employment Outlook for Web Design 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
Web Developers and Digital Interface Designers	11,299	12,887	1,587	14%	6,662	1,332	\$37	\$76
Total	11,299	12,887	1,588	14%	6,662	1,332	\$37	\$76

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 Web Design Occupations in SC-Monterey 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
Web Developers and Digital Interface Designers	1,916	2,198	282	15%	1,148	230	\$40	\$81
Total	1,916	2,198	282	15%	1,148	230	\$40	\$81

Source: EMSI 2021.3

SC-Monterey Sub-Region includes: Monterey, San Benito, Santa Cruz Counties**Job Postings in Bay Region and SC-Monterey Sub-Region****Table 3. Number of Job Postings by Occupation for latest 12 months (Oct 2020 - Sep 2021)**

Occupation	Bay Region	SC-Monterey
Web Developers	19,672	324

Source: Burning Glass

Table 4a. Top Job Titles for Web Design Occupations for latest 12 months (Oct 2020 - Sep 2021) Bay Region

Title	Bay	Title	Bay
Backend Engineer	685	Ux Researcher	263
Senior Front End Engineer	643	Senior Ux Designer	258
Senior Backend Engineer	642	Ui Developer	255
Front End Engineer	633	Ui/Ux Designer	171
Ux Designer	439	Ruby On Rails Developer	158
Front End Developer	432	Hired Backend Engineer - Remote	154
Backend Engineer - Remote	402	Hired Front End Engineer - Remote	144
Front End Engineer - Remote	365	Ux/Ui Designer	128
Web Developer	321	Front End Developer Entry Level	127

Source: Burning Glass

Table 4b. Top Job Titles for Web Design Occupations for latest 12 months (Oct 2020 - Sep 2021) SC-Monterey Sub-Region

Title	SC-Monterey	Title	SC-Monterey
Senior Backend Engineer	31	Hired Front End Engineer - Remote	9
Senior Front End Engineer	31	Ruby or Ruby On Rail Engineer	8
Front End Engineer - Remote	30	Front End Developer Entry Level	6
Backend Engineer	28	Hired Backend Engineer	5

Title	SC-Monterey	Title	SC-Monterey
Backend Engineer - Remote	28	Full Stack Web Developer	4
Front End Engineer	23	Web Developer	4
Hired Senior Backend Engineer	12	Front End Ui Engineer	3
Hired Senior Front End Engineer	12	Hired Front End Engineer	3
Hired Backend Engineer - Remote	11	Senior Web Developer	3

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Web Design 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)
Internet Publishing and Broadcasting and Web Search Portals	2,094	2,562	22%	19%
Custom Computer Programming Services	2,187	2,534	16%	20%
Software Publishers	1,429	1,849	29%	13%
Computer Systems Design Services	1,186	1,313	11%	11%
Data Processing, Hosting, and Related Services	473	599	27%	4%
Other Computer Related Services	336	393	17%	3%
Electronic Shopping and Mail-Order Houses	191	216	13%	2%
Corporate, Subsidiary, and Regional Managing Offices	217	207	-5%	2%
Administrative Management and General Management Consulting Services	154	188	22%	1%
Electronic Computer Manufacturing	112	129	15%	1%

Source: EMSI 2021.3

Table 6. Top Employers Posting Web Design Occupations in Bay Region and SC-Monterey Sub-Region (Oct 2020 - Sep 2021)

Employer	Bay	Employer	SC-Monterey
Uber	213	Joby Aviation	6
Amazon	172	University Of California	4
Apple Inc.	146	Target	3
Google Inc.	144	eBay	2
Cisco Systems Incorporated	132	Poly Incorporated	2

Employer	Bay	Employer	SC-Monterey
Facebook	119	Paystand Inc	2
Lucid Motors Inc	109	Nucamp	2
Splunk	103	Lithia Motors Incorporated	2
Adobe Systems	86	Google Inc.	2
Cynet Systems	75	Driscoll's	2

Source: Burning Glass

Educational Supply

There are nine (9) community colleges in the Bay Region issuing 39 awards on average annually (last 3 years ending 2018-19) on TOP 0614.30 - Website Design and Development. In the SC-Monterey Sub-Region, there is one (1) community college that issued 20 awards on average annually (last 3 years) on this TOP code.

Table 7. Community College Awards on TOP 0614.30 - Website Design and Development in Bay Region

College	Subregion	Associate	Certificate Low	Total
Berkeley City	East Bay	2	3	5
Cabrillo	SC-Monterey	6	14	20
Canada	Mid-Peninsula	0	4	4
Mission	Silicon Valley	0	5	5
Ohlone	East Bay	0	1	1
San Francisco	Mid-Peninsula	0	1	1
San Jose City	Silicon Valley	1	0	1
Skyline	Mid-Peninsula	1	0	1
West Valley	Silicon Valley	0	1	1
Total		10	29	39

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 1,332 annual openings for the Web Design occupational cluster and 39 annual (3-year average) awards for an annual undersupply of 1,293 students. In the SC-Monterey Sub-Region, there is also a gap with 230 annual openings and 20 annual (3-year average) awards for an annual undersupply of 210 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0614.30 Website Design and Development

Metric Outcomes	Bay All CTE Programs	Cabrillo All CTE Programs	State 0614.30	Bay 0614.30	SC-Monterey 0614.30	Cabrillo College 0614.30
Students with a Job Closely Related to Their Field of Study	73%	76%	65%	57%	N/A	N/A
Median Annual Earnings for SWP Exiting Students	\$44,575	\$39,206	\$35,220	\$39,950	N/A	N/A
Median Change in Earnings for SWP Exiting Students	30%	31%	31%	37%	N/A	N/A
Exiting Students Who Attained the Living Wage	53%	50%	52%	55%	N/A	N/A

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

Skills, Certifications and Education

Table 9. Top Skills for Web Design Occupations in Bay Region (Oct 2020 - Sep 2021)

Skill	Posting	Skill	Posting
JavaScript	8,401	Unit Testing	2,847
Software Engineering	5,715	Web Application Development	2,645
Front-end Development	5,137	Adobe Indesign	2,428
Java	4,931	HTML5	2,372
React Javascript	4,674	Hypertext Preprocessor (PHP)	2,372
Web Development	4,082	Scalability Design	2,324
Ruby on Rails	3,715	Adobe Acrobat	2,306
Python	3,629	MySQL	2,306
Ruby	3,562	Docker Software	2,305
SQL	3,408	Adobe Creative Suite	2,302
Git	3,237	Adobe Illustrator	2,265
AngularJS	3,179	Cross-browser	2,220
Adobe Photoshop	2,995	PostgreSQL	2,194
Software Development	2,903	Microsoft C#	2,121

Source: Burning Glass

Table 10. Certifications for Web Design Occupations in Bay Region (Oct 2020 - Sep 2021)

Certification	Posting	Certification	Posting
Certified Scrum Trainer (CST)	45	Certified Usability Analyst	8
Driver's License	35	Certified Scrum Professional (CSP)	6
Project Management Certification	18	Six Sigma Certification	5
Security Clearance	14	Automation Certification	5
Certified Novell Administrator	13	Investment Advisor	4
Mbe Certified	12	CompTIA Security+	3
Project Management Professional (PMP)	11	Cisco Certified Internetwork Expert (CCIE)	3
IT Infrastructure Library (ITIL) Certification	10	Certified Salesforce Administrator	3
Certified ScrumMaster (CSM)	9	Web Design Certification	2

Source: Burning Glass

Note: 99% 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 Web Design Occupations in Bay Region

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	179	1%
Associate's degree	82	1%
Bachelor's degree and higher	11,220	98%

Source: Burning Glass

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.

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/

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@baccc.net
- John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, jcarrese@ccsf.edu or (415) 267-6544