Graphic 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 Graphic 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 1,964 students in the Bay region and 342 students in the SC-Monterey Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 1030.00 Graphic Art and Design 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 Graphic Design Occupations in the 12 county Bay region and in the SC-Monterey sub-region for a proposed new program at Cabrillo College.

- **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%

- **Graphic Designers (27-1024):** Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 26%

Occupational Demand

Table 1. Employment Outlook for Graphic 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
Graphic Designers	10,422	10,460	38	0%	5,715	1,143	$26	$60
Total	**21,721**	**23,347**	**1,626**	**7%**	**12,377**	**2,475**		

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 Graphic 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
Graphic Designers	1,325	1,356	31	2%	758	152	$26	$61
Total	**3,241**	**3,554**	**313**	**10%**	**1,906**	**382**		

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
Graphic Designers	2,825	59

Source: Burning Glass

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

Title	Bay	Title	Bay
Backend Engineer	685	Web Developer	321
Senior Front End Engineer	643	Ux Researcher	263
Senior Backend Engineer	642	Senior Ux Designer	258
Front End Engineer	633	Ui Developer	255
Graphic Designer	487	Visual Designer	191
Ux Designer	439	Ui/Ux Designer	171
Front End Developer	432	Ruby On Rails Developer	158

Title	Bay	Title	Bay
Backend Engineer - Remote	402	Hired Backend Engineer - Remote	154
Front End Engineer - Remote	365	Hired Front End Engineer - Remote	144

Source: Burning Glass

Table 4b. Top Job Titles for Graphic 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 Backend Engineer - Remote	11
Senior Front End Engineer	31	Hired Front End Engineer - Remote	9
Front End Engineer - Remote	30	Ruby Or Ruby On Rail Engineer Ror	8
Backend Engineer	28	Front End Developer Entry Level	6
Backend Engineer - Remote	28	Hired Backend Engineer	5
Front End Engineer	23	Senior Graphic Designer	5
Graphic Designer	12	Full Stack Web Developer	4
Hired Senior Backend Engineer	12	Junior Graphic Designer	4
Hired Senior Front End Engineer	12	Web Developer	4

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Graphic 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	2,789	3,410	22%	13%
Custom Computer Programming Services	2,539	2,961	17%	12%
Software Publishers	1,812	2,336	29%	8%
Computer Systems Design Services	1,376	1,530	11%	6%
Graphic Design Services	1,527	1,334	-13%	7%
Interior Design Services	1,310	1,330	2%	6%
Data Processing, Hosting, and Related Services	559	705	26%	3%
Other Computer Related Services	388	458	18%	2%
Electronic Shopping and Mail-Order Houses	400	444	11%	2%
Corporate, Subsidiary, and Regional Managing Offices	447	426	-5%	2%

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)

Source: EMSI 2021.3

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

Employer	Bay	Employer	SC-Monterey
Uber	214	University Of California	8
Amazon	178	Joby Aviation	6
Apple Inc.	167	Vista Outdoor	5
Google Inc.	157	Vista Outdoor Inc	3
Cisco Systems Incorporated	154	Target	3
Facebook	131	Poly Incorporated	3
Lucid Motors Inc	112	Deloitte	3
Splunk	105	eBay	2
Adobe Systems	99	Universal Audio	2
Cynet Systems	78	Schipper Design	2

Source: Burning Glass

Educational Supply

There are 13 community colleges in the Bay Region issuing 175 awards on average annually (last 3 years ending 2018-19) on TOP 1030.00 Graphic Art and Design. In the SC-Monterey Sub-Region, there is one (1) community college that issued 9 awards on average annually (last 3 years) on this TOP code.

There are 12 other CTE educational institutions in the Bay Region issuing 305 awards on average annually (last 3 years ending 2016-17) on TOP 1030.00 Graphic Art and Design. There are no other CTE educational institutions in the SC-Monterey Sub-Region issuing awards on average annually (last 3 years) on this TOP code.

There is one (1) four-year institution in the Bay Region issuing 31 Bachelor's degrees on average annually (last 3 years ending 2016-17) on TOP 1030.00 Graphic Art and Design. There is one (1) four-year institution in the SC-Monterey Sub-Region issuing 31 Bachelor's degrees on this TOP code.

Table 7a. Community College Awards on TOP 1030.00 Graphic Art and Design in Bay Region

College	Subregion	Associate	Certificate Low	Noncredit	Total
Chabot	East Bay	1	0	0	1
De Anza	Silicon Valley	12	16	0	28
Diablo Valley	East Bay	5	0	0	5
Foothill	Silicon Valley	15	4	0	19
Laney	East Bay	6	4	0	10

College	Subregion	Associate	Certificate Low	Noncredit	Total
Las Positas	East Bay	1	1	0	2
Los Medanos	East Bay	11	2	0	13
Mission	Silicon Valley	9	7	0	16
Monterey	SC-Monterey	5	3	1	9
Napa	North Bay	4	0	0	4
Ohlone	East Bay	2	1	0	3
San Francisco	Mid-Peninsula	9	33	0	42
Santa Rosa	North Bay	5	18	0	23
Total		**85**	**89**	**1**	**175**

Source: Data Mart

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

Table 7b. Other CTE Institutions Awards on TOP 1030.00 Graphic Art and Design in Bay Region

College	Subregion	Associate Degree	Bachelor's Degree	Total
Academy of Art University	Mid-Peninsula	17	49	66
Argosy University-The Art Institute of California-San Francisco	Mid-Peninsula	8	6	14
Argosy University-The Art Institute of California-Silicon Valley	Silicon Valley	7	3	10
California College of the Arts	Mid-Peninsula	0	36	36
Dominican University of California	North Bay	0	3	3
FIDM-Fashion Institute of Design & Merchandising-San Francisco	Mid-Peninsula	53	0	53
Notre Dame de Namur University	Mid-Peninsula	0	5	5
Pacific Union College	North Bay	1	5	6
San Francisco Art Institute	Mid-Peninsula	0	5	5
San Francisco State University	Mid-Peninsula	0	47	47
San Jose State University	Silicon Valley	0	36	36
University of San Francisco	Mid-Peninsula	0	24	24
Total		**86**	**219**	**305**

Source: Data Mart

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

Table 7c. Bachelor's Degree Awards on TOP 1030.00 Graphic Art and Design in Bay Region

College	Subregion	Bachelor's Degree	Total
California State University-Monterey Bay	SC-Monterey	31	31
Total		**31**	**31**

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 2,475 annual openings for the Graphic Design occupational cluster and 511 annual (3-year average) awards for an annual undersupply of 1,964 students. In the SC-Monterey Sub-Region, there is also a gap with 382 annual openings and 40 annual (3-year average) awards for an annual undersupply of 342 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1030.00 Graphic Art and Design

Metric Outcomes	Bay All CTE Programs	Cabrillo All CTE Programs	State 1030.00	Bay 1030.00	SC-Monterey 1030.00	Cabrillo College 1030.00
Students with a Job Closely Related to Their Field of Study	73%	76%	61%	65%	N/A	N/A
Median Annual Earnings for SWP Exiting Students	$44,575	$39,206	$25,613	$35,018	$25,621	N/A
Median Change in Earnings for SWP Exiting Students	30%	31%	29%	23%	N/A	N/A
Exiting Students Who Attained the Living Wage	53%	50%	33%	37%	N/A	N/A

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

Skills, Certifications and Education

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

Skill	Posting	Skill	Posting
JavaScript	8,530	SQL	3,416
Software Engineering	5,745	Git	3,247
Front-end Development	5,185	AngularJS	3,183
Java	4,949	Software Development	2,990
Adobe Photoshop	4,838	Unit Testing	2,857
React Javascript	4,680	Web Application Development	2,678
Web Development	4,162	HTML5	2,432
Adobe Indesign	3,978	Graphic Design	2,414

Skill	Posting	Skill	Posting
Ruby on Rails	3,715	Visual Design	2,406
Python	3,701	Hypertext Preprocessor (PHP)	2,378
Adobe Illustrator	3,647	Scalability Design	2,346
Ruby	3,563	MySQL	2,310
Adobe Acrobat	3,515	Docker Software	2,305
Adobe Creative Suite	3,481	Cross-browser	2,222

Source: Burning Glass

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

Certification	Posting	Certification	Posting
Driver's License	76	Certified ScrumMaster (CSM)	9
Certified Scrum Trainer (CST)	45	Certified Usability Analyst	8
Project Management Certification	27	Certified Scrum Professional (CSP)	6
Security Clearance	20	Six Sigma Certification	5
Project Management Professional (PMP)	15	Automation Certification	5
Mbe Certified	13	Investment Advisor	4
Certified Novell Administrator	13	Graphic Design Certification	4
Food Handler Certification	11	Certified Graphic Designer	4
IT Infrastructure Library (ITIL) Certification	10	Leadership In Energy And Environmental Design (LEED) Certified	3
Drafting and Design	10		

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 Graphic Design Occupations in Bay Region

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	262	2%
Associate's degree	142	1%
Bachelor's degree and above	12,733	97%

Source: Burning Glass

Note: 42% of records have been excluded because they do not include a degree level. As a result, the chart above 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

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