

# Digital Imaging/Digital Photography Occupations Labor Market Information Report Berkeley City College

Prepared by the San Francisco Bay Center of Excellence  
for Labor Market Research  
February 2019

## Recommendation

Based on all available data, there appears to be an undersupply of Digital Imaging/Digital Photography 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 2,270 students in the Bay region and 586 students in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0614.60 - Computer Graphics and Digital Imagery 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 Berkeley City College and in the region.

## Introduction

This report profiles Digital Imaging/Digital Photography Occupations in the 12 county Bay region and in the East Bay sub-region for a program modification (substantial change) to an existing program at Berkeley City College.

- **Photographers (SOC 27-4021):** Photograph people, landscapes, merchandise, or other subjects, using digital or film cameras and equipment. May develop negatives or use computer software to produce finished images and prints. Includes scientific photographers, aerial photographers, and photojournalists.  
*Entry-Level Educational Requirement: High school diploma or equivalent*  
*Training Requirement: Long-term on-the-job training*  
*Percentage of Community College Award Holders or Some Postsecondary Coursework: 34%*
- **Fine Artists, Including Painters, Sculptors, and Illustrators (SOC 27-1013):** Create original artwork using any of a wide variety of media and techniques.  
*Entry-Level Educational Requirement: Bachelor's degree*  
*Training Requirement: Long-term on-the-job training*  
*Percentage of Community College Award Holders or Some Postsecondary Coursework: 27%*
- **Prepress Technicians and Workers (SOC 51-5111):** Format and proof text and images submitted by designers and clients into finished pages that can be printed. Includes digital and photo typesetting. May produce printing plates.  
*Entry-Level Educational Requirement: Postsecondary nondegree award*  
*Training Requirement: None*  
*Percentage of Community College Award Holders or Some Postsecondary Coursework: 39%*
- **Photographic Process Workers and Processing Machine Operators (SOC 51-9151):** Perform work involved in developing and processing photographic images from film or digital media. May perform precision tasks such as editing photographic negatives and prints.  
*Entry-Level Educational Requirement: High school diploma or equivalent*  
*Training Requirement: Short-term on-the-job training*  
*Percentage of Community College Award Holders or Some Postsecondary Coursework: 32%*

- **Graphic Designers (SOC 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: 29%

## Occupational Demand

**Table 1. Employment Outlook for Digital Imaging/Digital Photography Occupations in Bay Region**

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	10% Hourly Wage	Median Hourly Wage
Photographers	5,197	5,692	495	10%	2,691	538	\$13.30	\$17.95
Fine Artists, Including Painters, Sculptors, and Illustrators	2,210	2,265	55	2%	953	191	\$8.06	\$10.50
Photographic Process Workers and Processing Machine Operators	1,274	1,203	(72)	(6%)	987	197	\$11.17	\$15.03
Graphic Designers	12,797	13,191	393	3%	6,476	1,295	\$16.35	\$23.65
Prepress Technicians and Workers	520	487	(34)	(6%)	302	60	\$13.79	\$21.76
<b>Total</b>	<b>21,999</b>	<b>22,837</b>	<b>838</b>	<b>4%</b>	<b>11,410</b>	<b>2,282</b>	<b>\$14.44</b>	<b>\$20.44</b>

Source: EMSI 2019.1

**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 Digital Imaging/Digital Photography Occupations in East Bay Sub-Region**

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	10% Hourly Wage	Median Hourly Wage
Photographers	1,623	1,777	154	9%	852	170	\$13.07	\$17.83
Fine Artists, Including Painters, Sculptors, and Illustrators	712	746	34	5%	318	64	\$8.04	\$10.42
Photographic Process Workers and Processing Machine Operators	109	114	5	4%	93	19	\$10.61	\$16.96
Graphic Designers	3,342	3,393	51	2%	1,614	323	\$15.79	\$21.74
Prepress Technicians and Workers	139	129	(10)	(7%)	80	16	\$15.31	\$22.32
<b>Total</b>	<b>5,927</b>	<b>6,159</b>	<b>233</b>	<b>4%</b>	<b>2,958</b>	<b>591</b>	<b>\$14.01</b>	<b>\$19.23</b>

Source: EMSI 2019.1

**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 (Feb 2018 - Jan 2018)**

Occupation	Bay Region	East Bay
Graphic Designers (27-1024.00)	3,867	576
Photographers (27-4021.00)	811	234
Fine Artists, Including Painters, Sculptors, and Illustrators (27-1013.00)	799	169
Photographic Process Workers and Processing Machine Operators (51-9151.00)	334	69
Prepress Technicians and Workers (51-5111.00)	180	71

Digital Imaging/Digital Photography Occupations in 12 County Bay Region and in East Bay Sub-Region, 2019

Occupation	Bay Region	East Bay
<b>Total</b>	<b>5,991</b>	<b>1,119</b>

Source: Burning Glass

**Table 4. Top Job Titles for Digital Imaging/Digital Photography Occupations for latest 12 months (Feb 2018 - Jan 2018)**

Common Title	Bay	East Bay	Common Title	Bay	East Bay
Graphic Designer	1,545	280	Lead Visual Designer	37	6
Visual Designer	1,023	79	Senior Artist	36	3
Photographer	534	159	User Interface (UX)/User Experience (UX) Designer	32	1
Production Artist	221	41	Production Manager	31	4
Artist	148	46	Digital Artist	29	12
Production Designer	121	10	Technician	29	4
School Photographer	100	33	Senior Digital Design Engineer	25	6
Junior Graphic Designer	91	22	Real Estate Photographer	23	5
Graphic Artist	74	9	Senior Technical Artist	22	3
Deliver for Saucey Make	56	27	Wedding Photographer	22	2
Technical Artist	56	10	Assistant, Photography, Information And Technology Industry	21	8
Freelance Graphic Designer	53	11	Illustrator	21	1
Developer	42	7	Product Designer	19	1

Source: Burning Glass

## Industry Concentration

**Table 5. Industries hiring Digital Imaging/Digital Photography Workers in Bay Region**

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2017)	Jobs in Industry (2022)	% Change (2017-22)	% in Industry (2017)
All Other Professional, Scientific, and Technical Services (541990)	2,832	2,940	13%	13.3%
Graphic Design Services (541430)	2,397	2,299	(12%)	10.4%
Interior Design Services (541410)	1,885	1,907	7%	8.6%
Independent Artists, Writers, and Performers (711510)	1,728	1,708	(3%)	7.7%
Internet Publishing and Broadcasting and Web Search Portals (519130)	818	868	43%	3.9%
Photography Studios, Portrait (541921)	697	716	(7%)	3.2%
Commercial Printing (except Screen and Books) (323111)	542	524	(20%)	2.4%
Custom Computer Programming Services (541511)	487	497	14%	2.2%
Other Specialized Design Services (541490)	415	422	10%	1.9%
Industrial Design Services (541420)	394	395	6%	1.8%
Advertising Agencies (541810)	379	377	(1%)	1.7%
Commercial Photography (541922)	334	375	10%	1.7%
Electronic Shopping and Mail-Order Houses (454110)	309	320	24%	1.4%
Corporate, Subsidiary, and Regional Managing Offices (551114)	288	304	10%	1.4%
Computer Systems Design Services (541512)	289	284	7%	1.3%
Software Publishers (511210)	252	264	23%	1.2%
Newspaper Publishers (511110)	276	264	(31%)	1.2%

Source: EMSI 2019.1

**Table 6. Top Employers Posting Digital Imaging/Digital Photography Occupations in Bay Region and East Bay Sub-Region (Feb 2018 - Jan 2018)**

Employer	Bay	Employer	Bay	Employer	East Bay
Lifetouch	118	Ideo	16	Lifetouch	41
Pro Motionpix, Llc	86	Levi Strauss	16	Pro Motionpix, Llc	40
Iconic Group	65	Wunderland	16	Saucey	27
Apple Inc.	60	Lululemon	15	Iconic Group	14
Saucey	56	Xcite Advertising	15	Bella Baby Photography	13
Estee Lauder Company	45	Capital Markets Placement	14	VF Corporation	13
Facebook	42	IBM	14	US Army	12
Google Inc.	34	The Realreal	14	Dealervision Com	10
Gradimages	32	Cryptic Studios Incorporated	13	Estee Lauder Company	10
Williams-Sonoma	32	Disney	13	Gradimages	9
Marriott International Incorporated	30	Electronic Arts Incorporated	13	Xcite Advertising	9
Bella Baby Photography	25	Elsa Corporation	13	Ulta Beauty Inc.	7
Dealervision Com	22	Stanford University	13	Lululemon	6
Mom365	20	VF Corporation	13	Mom365	6
Spartan Tool Llc	20	Artisan Creative	12	Crawford Group	5
Hogarth Worldwide	19	Hornblower Cruises Events	12	Daily Californian	5
Gap Inc.	17	Jbconnect	12	General Electric Company	5
US Army	17	Morphe	12	Jcpenney Portraits	5

Source: Burning Glass

## Educational Supply

There are four community colleges in the Bay Region issuing 12 awards on average annually (last 3 years) on TOP 0614.60 - Computer Graphics and Digital Imagery. Ohlone College is the only college issuing awards on this TOP code in the East Bay Sub-Region, issuing 5 awards on average annually (last 3 years).

**Table 7. Awards on TOP 0614.60 - Computer Graphics and Digital Imagery in the Bay Region**

College	Sub-Region	Headcount	Associates	Certificates	Total
Berkeley City College	East Bay	323			
Canada	Mid-Peninsula	58		2	2
Contra Costa College	East Bay	104			
De Anza	Silicon Valley	125			
Gavilan	Silicon Valley	55	2	0	3
Marin	North Bay	20			
Mission	Silicon Valley	146		2	2
Ohlone	East Bay	82		5	5
San Jose City	Silicon Valley	53			
Santa Rosa	North Bay	411			
West Valley	Silicon Valley	40			
<b>Total Bay Region</b>		<b>1,417</b>	<b>2</b>	<b>9</b>	<b>12</b>
<b>Total East Bay Sub-Region</b>		<b>509</b>	<b>0</b>	<b>5</b>	<b>5</b>

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 2,282 annual openings for the Digital Imaging/Digital Photography occupational cluster and 12 annual (3-year average) awards for an annual undersupply of 2,270 students. In the East Bay Sub-Region, there is also a gap with 591 annual openings and 5 annual awards (3-year average) for an annual undersupply of 586 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0614.60 - Computer Graphics and Digital Imagery**

2015-16	Bay (All CTE Programs)	Berkeley City College (All CTE Programs)	State (0614.60)	Bay (0614.60)	East Bay (0614.60)	Berkeley City College (0614.60)
% Employed Four Quarters After Exit	74%	54%	58%	48%	45%	45%
Median Quarterly Earnings Two Quarters After Exit	\$23,396	\$16,762	\$13,443	\$16,937	\$20,123	\$20,123
Median % Change in Earnings	46%	38%	53%	25%	14%	14%
% of Students Earning a Living Wage	63%	45%	40%	43%	40%	40%

Source: Launchboard Pipeline (version available on 2/8/19)

## Skills, Certifications and Education

**Table 9. Top Skills for Digital Imaging/Digital Photography Occupations in Bay Region (Feb 2018 - Jan 2018)**

Skill	Postings	Skill	Postings	Skill	Postings
Adobe Photoshop	3,023	Animation	444	Adobe Photoshop	509
Graphic Design	2,589	Packaging	437	Graphic Design	477
Adobe Indesign	2,228	Scheduling	396	Adobe Indesign	392
Adobe Illustrator	1,823	Prototyping	388	Adobe Illustrator	292
Adobe Acrobat	1,635	Interaction Design	384	Adobe Acrobat	274
Adobe Creative Suite	1,605	User Interface (UI) Design	337	Adobe Creative Suite	269
Visual Design	1,410	E-Commerce	315	Photography	263
Typesetting	1,180	Retail Industry Knowledge	298	Typesetting	161
Photography	1,013	Infographics	286	Customer Service	133
Web Site Design	720	Process Design	276	Social Media	131
Social Media	667	Budgeting	275	Visual Design	126
Illustration	516	Marketing Materials	275	Web Site Design	108
Customer Service	488	UX Wireframes	258	Packaging	98
Project Management	482	Lifting Ability	253	Scheduling	90
Adobe Aftereffects	460	Maya	248	Lifting Ability	78

Source: Burning Glass

**Table 10. Certifications for Digital Imaging/Digital Photography Occupations in the Bay Region (Feb 2018 - Jan 2018)**

Note: 92% 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
Driver's License	132	First Aid Cpr Aed	2
Makeup Artist	10	Six Sigma Certification	2
Certified ScrumMaster (CSM)	3	Alcohol Server Certification	1
Project Management Certification	3	LEED AP	1
Project Management Professional (PMP)	3	Licensed Barber	1
Basic Life Saving (BLS)	2	Pilot Certification	1
Certified Ophthalmic Assistant	2	ServSafe	1
Certified Ophthalmic Technician	2	Six Sigma Black Belt Certification	1

Source: Burning Glass

**Table 11. Education Requirements for Digital Imaging/Digital Photography Occupations in Bay Region**

Note: 51% 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
High school or vocational training	192 (35%)
Associate Degree	20 (4%)
Bachelor's Degree or Higher	332 (61%)

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/](http://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, Data Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), [doreen@baccc.net](mailto:doreen@baccc.net) or (831) 479-6481
- John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, [jcarrese@ccsf.edu](mailto:jcarrese@ccsf.edu) or (415) 267-6544