** 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 Open-ings | Average Annual Open-ings | 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 |
| **Total** | **21,999** | **22,837** | **838** | **4%** | **11,410** | **2,282** | **$14.44** | **$20.44** |

*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 Open-ings | Average Annual Open-ings | 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 |
| **Total** | **5,927** | **6,159** | **233** | **4%** | **2,958** | **591** | **$14.01** | **$19.23** |

*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 |
| **Total** | **5,991** | **1,119** |

*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 | Jbcconnect | 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 |  |  |  |
| **Total Bay Region** | | **1,417** | **2** | **9** | **12** |
| **Total East Bay Sub-Region** | | **509** | **0** | **5** | **5** |

# *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 CCCCO 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

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