** Visual Communication Occupations**

**Labor Market Information Report**

**Solano College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

December 2018

# Recommendation

Based on all available data, there appears to be an undersupply of Visual Communication workers compared to the demand for this cluster of occupations in the Bay region and in the North Bay sub-region (Marin, Napa, Solano and Sonoma Counties). The gap is about 1,430 students annually in the Bay region and 174 students annually in the North Bay sub-region.

This report also provides student outcomes data on employment and earnings for programs on TOP 1013.00 - Commercial Art in the state and region. It is recommended that this 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 Solano College and in the region.

# Introduction

This report profiles Visual Communication Occupations in the 12 county Bay region and in the North Bay sub-region for a proposed new program at Solano College.

|  |
| --- |
| * **Graphic Designers (SOC 27-1024):** Design or create graphics to meet specific commercialor 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%* |
|  |
| * **Coating, Painting, and Spraying Machine Setters, Operators, and Tenders (SOC 51-9121):** Set up, operate, or tend machines to coat or paint any of a wide variety of products including, glassware, cloth, ceramics, metal, plastic, paper, or wood, with lacquer, silver, copper, rubber, varnish, glaze, enamel, oil, or rust-proofing materials. Excludes “Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic" (51-4193) and "Painters, Transportation Equipment" (51-9122). |
| *Entry-Level Educational Requirement: High school diploma or equivalent* |
| *Training Requirement: Moderate-term on-the-job training* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 23%* |

# Occupational Demand

**Table 1. Employment Outlook for Visual Communication Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Graphic Designers | 12,684 | 13,058 | 374 | 3% | 6,401 | 1,280 | $16.39 | $23.81 |
| Coating, Painting, and Spraying Machine Setters, Operators, and Tenders | 1,217 | 1,342 | 125 | 10% | 782 | 156 | $12.39 | $17.06 |
| **Total** | **13,901** | **14,400** | **499** | **4%** | **7,183** | **1,437** | **$16.04** | **$23.22** |

*Source: EMSI 2018.4*

**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 Visual Communication Occupations in North Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Graphic Designers | 1,671 | 1,661 | (10) | (1%) | 783 | 157 | $15.43 | $20.92 |
| Coating, Painting, and Spraying Machine Setters, Operators, and Tenders | 175 | 193 | 18 | 10% | 113 | 23 | $10.76 | $15.97 |
| **TOTAL** | **1,846** | **1,854** | **7** | **0%** | **896** | **179** | **$14.99** | **$20.45** |

*Source: EMSI 2018.4*

**North Bay Sub-Region** includes Marin, Napa, Solano and Sonoma Counties

### Job Postings in Bay Region and North Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Dec 2017 - Nov 2018)**

|  |  |  |
| --- | --- | --- |
| Occupation | Bay Region | North Bay |
| Graphic Designers (SOC 27-1024) | 3,400 | 118 |
| Coating, Painting, and Spraying Machine Setters, Operators, and Tenders (SOC 51-9121): | 27 | 3 |
| **Total** | **3,427** | **121** |

*Source: Burning Glass*

**Table 4. Top Job Titles for Visual Communication Occupations for latest 12 months (Dec 2017 - Nov 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | North Bay | Common Title | Bay | North Bay |
| Graphic Designer | 1,359 | 60 | Digital Design Engineer | 14 |  |
| Visual Designer | 919 | 4 | Staff Digital Design Engineer | 14 |  |
| Production Artist | 186 | 18 | Creative Designer | 13 | 1 |
| Production Designer | 92 | 44 | Junior Visual Designer | 13 |  |
| Junior Graphic Designer | 83 | 3 | Graphic Specialist | 12 |  |
| Graphic Artist | 67 | 8 | Product Designer | 12 | 1 |
| Lead Visual Designer | 34 |  | Interaction Designer | 11 |  |
| Freelance Graphic Designer | 31 | 2 | Print Production Artist | 11 |  |
| User Interface (UX)/User Experience (UX) Designer | 29 |  | Senior Asic Digital Design Engineer | 11 |  |
| Production Manager | 28 |  | User Experience (UX) Designer | 11 |  |
| Senior Digital Design Engineer | 20 |  | Design Specialist | 10 |  |
| Art Producer | 16 |  | Interactive Designer | 10 |  |
| Design Producer | 15 |  | Photo Producer | 10 |  |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Visual Communication 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) |
| Graphic Design Services (541430) | 2,170 | 2,104 | (11%) | 15.1% |
| Interior Design Services (541410) | 1,741 | 1,753 | 6% | 12.6% |
| Internet Publishing and Broadcasting and Web Search Portals (519130) | 547 | 563 | 38% | 4.0% |
| Custom Computer Programming Services (541511) | 478 | 485 | 13% | 3.5% |
| Other Specialized Design Services (541490) | 383 | 385 | 7% | 2.8% |
| Commercial Printing (except Screen and Books) (323111) | 383 | 379 | (17%) | 2.7% |
| Advertising Agencies (541810) | 361 | 360 | (1%) | 2.6% |
| Industrial Design Services (541420) | 362 | 359 | 4% | 2.6% |
| Computer Systems Design Services (541512) | 282 | 280 | 9% | 2.0% |
| Corporate, Subsidiary, and Regional Managing Offices (551114) | 263 | 270 | 6% | 1.9% |
| Electronic Shopping and Mail-Order Houses (454110) | 248 | 253 | 21% | 1.8% |
| Software Publishers (511210) | 240 | 247 | 21% | 1.8% |
| Newspaper Publishers (511110) | 194 | 190 | (27%) | 1.4% |
| Administrative Management and General Management Consulting Services (541611) | 185 | 190 | 19% | 1.4% |
| Public Relations Agencies (541820) | 180 | 180 | 2% | 1.3% |
| Electroplating, Plating, Polishing, Anodizing, and Coloring (332813) | 154 | 159 | 14% | 1.1% |
| Other Scientific and Technical Consulting Services (541690) | 150 | 147 | (4%) | 1.1% |
| Periodical Publishers (511120) | 136 | 134 | 1% | 1.0% |

*Source: EMSI 2018.4*

**Table 6. Top Employers Posting Visual Communication Occupations in Bay Region and North Bay Sub-Region (Dec 2017 - Nov 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | North Bay |
| Apple Inc. | 45 | Stanford University | 10 | Elsa Corporation | 8 |
| Williams-Sonoma | 32 | Synopsys Incorporated | 10 | Delicato Family Vineyards | 3 |
| Google Inc. | 29 | 80Twenty | 9 | Navitas Naturals | 3 |
| Facebook | 26 | Elsa Corporation | 9 | Navitas Organics | 3 |
| Spartan Tool Llc | 14 | Fast Forward Accelerate Good | 9 | Biomarin Pharmaceutical Incorporated | 2 |
| Gap Inc. | 13 | Osi Engineering, Inc | 9 | California State University | 2 |
| Ideo | 13 | Texas Instruments | 9 | California State University Office Of The Chancellor | 2 |
| Levi Strauss | 13 | University San Francisco | 9 | Dc Solar | 2 |
| VF Corporation | 13 | Hornblower Cruises Events | 8 | Press Democrat | 2 |
| Wunderland | 13 | Jbcconnect | 8 | Salvation Army | 2 |
| Artisan Creative | 12 | Qualcomm | 8 | Sonic Drive-In | 2 |
| Rodan Fields Llc | 12 | San Jose State University | 8 | Vista Outdoor Inc | 2 |
| Walmart / Sam's | 12 | California College Arts | 7 | Vista Outdoors | 2 |
| Hogarth Worldwide | 11 | Hok | 7 | Wx Brands | 2 |

*Source: Burning Glass*

# Educational Supply

There are three community colleges in the Bay Region issuing 7 awards annually on TOP 1013.00 - Commercial Art. Solano College is the only college in the North Bay sub-region issuing awards on this TOP code, with 5 awards annually.

**Table 7. Awards on TOP 1013.00 - Commercial Art in the Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| College | Sub-Region | Headcount | Associates | Total |
| **Chabot** | East Bay | 30 |  |  |
| **Laney** | East Bay | 79 | 1 | 1 |
| **City of College of San Francisco** | Mid-Peninsula | n/a |  |  |
| **San Mateo** | Mid-Peninsula | n/a | 1 | 1 |
| **Solano** | North Bay | n/a | 5 | 5 |
| **Total Bay Region** | | **109** | **7** | **7** |
| **Total North Bay Sub-Region** | | **n/a** | **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 1,437 annual openings for the Visual Communication occupational cluster and 7 annual awards for an annual undersupply of 1,430. In the North Bay sub-region, there is also a gap with 179 annual openings and 5 annual awards for an annual undersupply of 174.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1013.00 - Commercial Art**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | Solano College (All CTE Programs) | State (1013.00) | Bay (1013.00) | North Bay (1013.00) | Solano College (1013.00) |
| % Employed Four Quarters After Exit | 74% | 71% | 64% | n/a | n/a | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $7,671 | $5,293 | n/a | n/a | n/a |
| Median % Change in Earnings | 46% | 57% | 37% | n/a | n/a | n/a |
| % of Students Earning a Living Wage | 63% | 49% | 28% | n/a | n/a | n/a |

*Source: Launchboard Pipeline (version available on 12/12/18)*

# Skills and Education

**Table 9. Top Skills for Visual Communication Occupations in Bay Region (Dec 2017 - Nov 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Adobe Photoshop | 2,262 | Adobe Aftereffects | 357 | Photography | 219 |
| Graphic Design | 2,129 | Interaction Design | 349 | Scheduling | 218 |
| Adobe Indesign | 1,820 | Packaging | 343 | Print Production | 210 |
| Adobe Illustrator | 1,460 | Art Direction | 314 | Budgeting | 196 |
| Adobe Acrobat | 1,321 | Animation | 311 | Product Design | 196 |
| Adobe Creative Suite | 1,300 | Prototyping | 303 | Digital Marketing | 181 |
| Visual Design | 1,227 | User Interface (UI) Design | 294 | Creative Design | 178 |
| Typesetting | 970 | Process Design | 257 | Brand Identity | 159 |
| Web Site Design | 599 | Infographics | 242 | JavaScript | 158 |
| Social Media | 520 | E-Commerce | 229 | Retail Industry Knowledge | 150 |
| Project Management | 397 | Project Design | 226 | Creative Direction | 149 |
| Illustration | 374 | UX Wireframes | 223 | Motion Graphics | 149 |
| Digital Design | 367 | Marketing Materials | 220 | Video Editing | 148 |

*Source: Burning Glass*

**Table 10. Education Requirements for Visual Communication Occupations in Bay Region**

Note: 50% 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 | 67 (4%) |
| Associate Degree | 31 (2%) |
| Bachelor’s Degree or Higher | 1,615 (94%) |

*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

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