

# Virtual Production Occupations

# Labor Market Information Report

# Laney College

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

**September 2021**

## Recommendation

Based on all available data, there appears to be an “undersupply” of Virtual Production 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 1,428 students in the Bay region and 271 students in the East Bay Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0699.00 - Media and Communications 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 Laney College and in the region.

This report profiles Virtual Production Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Laney College.

* **Special Effects Artists and Animators (27-1014):** Create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in products or creations, such as computer games, movies, music videos, and commercials.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 26%
* **Producers and Directors (27-2012):** Produce or direct stage, television, radio, video, or motion picture productions for entertainment, information, or instruction. Responsible for creative decisions, such as interpretation of script, choice of actors or guests, set design, sound, special effects, and choreography.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 20%
* **Camera Operators, Television, Video, and Film (27-4031):** Operate television, video, or motion picture camera to record images or scenes for various purposes, such as TV broadcasts, advertising, video production, or motion pictures.  
    Entry-Level Educational Requirement: Bachelor’s degree  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 24%

## Occupational Demand

**Table 1. Employment Outlook for Virtual Production 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** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Special Effects Artists and Animators | 4,853 | 5,213 | 360 | 7% | 3,349 | 670 | $32 | $68 |
| Producers and Directors | 5,555 | 5,893 | 338 | 6% | 3,253 | 651 | $35 | $70 |
| Camera Operators, Television, Video, and Film | 872 | 940 | 67 | 8% | 539 | 108 | $16 | $46 |
| **Total** | **11,280** | **12,046** | **766** | **7%** | **7,141** | **1,429** | **$32.24** | **$67.28** |
| 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 Virtual Production Occupations in East Bay 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** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Special Effects Artists and Animators | 830 | 845 | 15 | 2% | 508 | 102 | $25 | $62 |
| Producers and Directors | 1,201 | 1,257 | 56 | 5% | 678 | 136 | $30 | $66 |
| Camera Operators, Television, Video, and Film | 245 | 273 | 28 | 12% | 165 | 33 | $16 | $45 |
| **Total** | **2,276** | **2,375** | **99** | **4%** | **1,351** | **271** | **$26.67** | **$62.28** |
| Source: EMSI 2021.3 | | | | | | | | |

**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 (Sep 2020 - Aug 2021)**

| **Occupation** | **Bay Region** | **East Bay** |
| --- | --- | --- |
| Producers | 1,094 | 149 |
| Multimedia Artists and Animators | 578 | 86 |
| Camera Operators, Television, Video, and Motion Picture | 303 | 68 |
| Program Directors | 38 | 12 |
| Directors- Stage, Motion Pictures, Television, and Radio | 32 | 6 |
| Talent Directors | 22 | 4 |
| Technical Directors/Managers | 3 | 0 |
| Source: Burning Glass | | |

**Table 4a. Top Job Titles for Virtual Production Occupations for latest 12 months (Sep 2020 - Aug 2021) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Producer | 113 | Senior Interaction Designer | 27 |
| Interaction Designer | 56 | Paid Media Manager | 26 |
| Associate Producer | 49 | Localization Producer | 19 |
| Motion Graphic Designer | 46 | Freelance Videographer | 18 |
| Videographer | 45 | News Producer | 17 |
| Video Producer | 41 | Senior Producer | 17 |
| Creative Producer | 40 | Wedding Videographer | 16 |
| Digital Producer | 38 | Integrated Producer | 13 |
| Executive Producer | 31 | Producer I, News | 12 |
| Source: Burning Glass | | | |

**Table 4b. Top Job Titles for Virtual Production Occupations for latest 12 months (Sep 2020 - Aug 2021) East Bay Sub-Region**

| **Title** | **East Bay** | **Title** | **East Bay** |
| --- | --- | --- | --- |
| Digital Producer | 16 | Newscast Director | 5 |
| Producer | 16 | Video Producer | 5 |
| Executive Producer | 10 | Wedding Videographer | 5 |
| Motion Graphic Designer | 10 | Associate Imagery Producer | 4 |
| News Producer | 10 | Associate Producer | 4 |
| Paid Media Manager | 10 | Executive Assistant, Office Of The Executive Producer | 4 |
| Freelance Videographer | 9 | Interaction Designer, Senior | 4 |
| Videographer | 7 | Integrated Producer | 3 |
| Creative Producer | 5 | Junior Interaction Designer - Remote | 3 |
| Source: Burning Glass | | | |

## Industry Concentration

**Table 5. Industries hiring Virtual Production 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 | 1,855 | 2,204 | 19% | 17% |
| Motion Picture and Video Production | 1,833 | 2,012 | 10% | 17% |
| Software Publishers | 1,702 | 2,006 | 18% | 15% |
| Television Broadcasting | 632 | 644 | 2% | 6% |
| Teleproduction and Other Postproduction Services | 409 | 448 | 10% | 4% |
| Custom Computer Programming Services | 354 | 408 | 15% | 3% |
| Independent Artists, Writers, and Performers | 394 | 406 | 3% | 4% |
| Cable and Other Subscription Programming | 311 | 236 | -24% | 3% |
| Computer Systems Design Services | 201 | 218 | 8% | 2% |
| Interior Design Services | 170 | 181 | 7% | 2% |
| Source: EMSI 2021.3 | | | | |

**Table 6. Top Employers Posting Virtual Production Occupations in Bay Region and East Bay Sub-Region (Sep 2020 - Aug 2021)**

| **Employer** | **Bay** | **Employer** | **East Bay** |
| --- | --- | --- | --- |
| Apple Inc. | 35 | U.S. Bancorp | 12 |
| Gap Inc. | 29 | Pubg San Ramon | 8 |
| Google Inc. | 28 | Lucid Motors Inc | 8 |
| Facebook | 26 | Blue Cross Blue Shield of California | 8 |
| Disney | 26 | Gallagher | 7 |
| U.S. Bancorp | 22 | Vagaro, Inc | 6 |
| Activision | 22 | Pubg | 6 |
| Electronic Arts Incorporated | 19 | Fox Corporation | 5 |
| The Mom Project | 18 | Fox | 5 |
| NBC | 16 | Amyris, Inc | 5 |
| Source: Burning Glass | | | |

## Educational Supply

There is one (1) community college in the Bay Region issuing one (1) award on average annually (last 3 years ending 2018-19) on TOP 0699.00 - Media and Communications.

**Table 7. Community College Awards on TOP 0699.00 - Media and Communications in Bay Region**

| **College** | **Subregion** | **Associate** | **Total** |
| --- | --- | --- | --- |
| San Jose City | Silicon Valley | 1 | 1 |
| **Total** |  | **1** | **1** |
| 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 1,429 annual openings for the Virtual Production occupational cluster and one (1) annual (3-year average) award for an annual undersupply of 1,428 students. In the East Bay Sub-Region, there is also a gap with 271 annual openings and no annual (3-year average) awards for an annual undersupply of 271 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0699.00 - Media and Communications**

| **Metric Outcomes** | **Bay**  **All CTE Programs** | **Laney**  **All CTE Programs** | **State 0699.00** | **Bay 0699.00** | **East Bay 0699.00** | **Laney 0699.00** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study | 73% | 70% | 58% | N/A | N/A | N/A |
| Median Annual Earnings for SWP Exiting Students | $44,575 | $39,109 | $31,072 | N/A | N/A | N/A |
| Median Change in Earnings for SWP Exiting Students | 30% | 31% | 31% | 30% | 16% | N/A |
| Exiting Students Who Attained the Living Wage | 53% | 50% | 52% | 46% | 48% | N/A |
| Source: Launchboard Strong Workforce Program Median of 2016-18. | | | | | | |

## Skills, Certifications and Education

**Table 9. Top Skills for Virtual Production Occupations in Bay Region (Sep 2020 - Aug 2021)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Budgeting | 450 | Interaction Design | 197 |
| Project Management | 433 | Content Management | 183 |
| Scheduling | 415 | Graphic Design | 170 |
| Adobe Photoshop | 411 | Video Editing | 157 |
| Social Media | 299 | Facebook | 154 |
| Video Production | 264 | Quality Assurance and Control | 147 |
| Adobe Indesign | 261 | Photography | 146 |
| Adobe Illustrator | 243 | Motion Graphics | 143 |
| Animation | 236 | Youtube | 140 |
| Adobe Acrobat | 235 | Maya | 137 |
| Adobe Creative Suite | 233 | Atlassian JIRA | 130 |
| Broadcast Industry Knowledge | 233 | Prototyping | 123 |
| Videography | 216 | Adobe Premiere | 122 |
| Adobe Aftereffects | 211 | Visual Design | 121 |
| Source: Burning Glass | | | |

**Table 10. Certifications for Virtual Production Occupations in the Bay Region (Sep 2020 - Aug 2021)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Driver's License | 66 | Cdl Class C | 3 |
| Project Management Certification | 15 | Security Clearance | 2 |
| Certified ScrumMaster (CSM) | 15 | Microsoft Certified Professional (MCP) | 1 |
| Project Management Professional (PMP) | 12 | Mbe Certified | 1 |
| First Aid Cpr Aed | 5 | Google AdWords Training | 1 |
| Source: Burning Glass | | | |

*Note: 94% 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 Virtual Production Occupations in Bay Region**

| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| --- | --- | --- |
| High school or vocational training | 91 | 9% |
| Associate's degree | 28 | 3% |
| Bachelor's degree and higher | 928 | 88% |
| Source: Burning Glass | | |

*Note: 49% 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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