

# Digital Media Arts Occupations Labor Market Information Report Chabot College

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

Based on all available data, there appears to be an undersupply of Digital Media Arts 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 1,934 students in the Bay region and 470 students in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0614.00 - Digital Media 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 Chabot College and in the region.

## Introduction

This report profiles Digital Media Arts Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Chabot College.

- **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%
- **Multimedia Artists and Animators (SOC 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: 27%
- **Film and Video Editors (SOC 27-4032):** Edit moving images on film, video, or other media. May edit or synchronize soundtracks with images. Excludes "Sound Engineering Technicians"(27-4014).  
Entry-Level Educational Requirement: Bachelor's degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 27%
- **Camera Operators, Television, Video, and Motion Picture (SOC 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: 27%

## Occupational Demand

**Table 1. Employment Outlook for Digital Media Arts 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
Graphic Designers	12,797	13,191	393	3%	6,476	1,295	\$16.35	\$23.65
Multimedia Artists and Animators	4,730	5,028	298	6%	2,247	449	\$13.65	\$38.08
Film and Video Editors	1,599	1,758	159	10%	960	192	\$20.00	\$29.51
Camera Operators, Television, Video, and Motion Picture	731	767	35	5%	391	78	\$15.50	\$22.18
<b>Total</b>	<b>19,857</b>	<b>20,744</b>	<b>886</b>	<b>4%</b>	<b>10,074</b>	<b>2,015</b>	<b>\$15.97</b>	<b>\$27.51</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 Media Arts 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
Graphic Designers	3,342	3,393	51	2%	1,614	323	\$15.79	\$21.74
Multimedia Artists and Animators	907	946	39	4%	404	81	\$12.21	\$31.02
Film and Video Editors	389	459	70	18%	266	53	\$21.43	\$28.40
Camera Operators, Television, Video, and Motion Picture	169	189	20	12%	103	21	\$16.63	\$20.92
<b>TOTAL</b>	<b>4,807</b>	<b>4,987</b>	<b>181</b>	<b>4%</b>	<b>2,388</b>	<b>477</b>	<b>\$15.60</b>	<b>\$24.00</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 (April 2018 - March 2019)**

Occupation	Bay Region	East Bay
Graphic Designers (27-1024.00)	4,272	620
Multimedia Artists and Animators (27-1014.00)	977	125
Camera Operators, Television, Video, and Motion Picture (27-4031.00)	289	64
Film and Video Editors (27-4032.00)	216	30
<b>Total</b>	<b>5,754</b>	<b>839</b>

Source: Burning Glass

**Table 4. Top Job Titles for Digital Media Arts Occupations for latest 12 months (April 2018 - March 2019)**

Common Title	Bay	East Bay	Common Title	Bay	East Bay
Graphic Designer	1,844	303	Visual Effects Artist	43	1
Visual Designer	1,109	95	User Interface - User Experience Designer	41	1
Interaction Designer	492	57	Lead Visual Designer	35	6
Production Artist	239	42	Production Manager	32	4
Video Editor	210	27	Senior Digital Design Engineer	31	9
Videographer	186	48	Content Producer	25	0
Production Designer	124	11	Camera Operator	19	9
Animator	113	13	Design Producer	19	1
Junior Graphic Designer	98	20	Junior Visual Designer	19	1
Graphic Artist	86	9	3D Modeler	17	1
Freelance Graphic Designer	79	17	Product Designer	17	1
Interactive Designer	69	10	Creative Designer	16	5

Source: Burning Glass

## Industry Concentration

**Table 5. Industries hiring Digital Media Arts 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)
Internet Publishing and Broadcasting and Web Search Portals (519130)	1,456	1,885	11%	1.8%
Software Publishers (511210)	944	1,083	7%	2.0%
Custom Computer Programming Services (541511)	926	1,021	7%	0.9%
Motion Picture and Video Production (512110)	846	846	6%	22.2%
Graphic Design Services (541430)	654	534	5%	23.8%
Computer Systems Design Services (541512)	531	574	4%	0.9%
Interior Design Services (541410)	493	550	4%	24.0%
Advertising Agencies (541810)	459	457	3%	6.5%
Corporate, Subsidiary, and Regional Managing Offices (551114)	330	344	2%	0.4%
Commercial Printing (except Screen and Books) (323111)	310	250	2%	6.3%
Teleproduction and Other Postproduction Services (512191)	267	259	2%	22.3%
Electronic Shopping and Mail-Order Houses (454110)	257	307	2%	1.3%
Television Broadcasting (515120)	235	231	2%	8.9%
Public Relations Agencies (541820)	210	218	2%	6.3%
Industrial Design Services (541420)	194	225	1%	22.4%
Newspaper Publishers (511110)	189	136	1%	6.2%
Cable and Other Subscription Programming (515210)	176	157	1%	4.2%
Administrative Management and General Management Consulting Services (541611)	169	201	1%	0.9%
Data Processing, Hosting, and Related Services (518210)	165	206	1%	0.6%
Other Specialized Design Services (541490)	144	170	1%	24.0%
Other Scientific and Technical Consulting Services (541690)	142	134	1%	0.9%
Periodical Publishers (511120)	136	142	1%	5.7%

Source: EMSI 2019.1

**Table 6. Top Employers Posting Digital Media Arts Occupations in Bay Region and East Bay Sub-Region (April 2018 - March 2019)**

Employer	Bay	Employer	Bay	Employer	East Bay
Apple Inc.	69	Mediazoo	14	Logitech	11
Google Inc.	57	Wunderland	14	General Electric Co.	10
Facebook	36	2K Games	13	Lululemon	10
Williams-Sonoma	34	Globa Channel Management, Inc	13	VF Corporation	9
Lululemon	25	Ford Motor Co.	12	Pro Pipe	8
Spartan Tool Llc	25	General Electric Co.	12	Arta Print And Promotions	6
Ideo	24	Osi Engineering, Inc	12	Mediazoo	6
Stanford University	21	Qualcomm	12	Pandora Media	6
Jbconnect	20	Electronic Arts Inc.	11	The North Face	6
Accenture	19	Hh Global Inc.	11	Workday, Inc	6
Gap Inc.	17	Salesforce	11	Big Fish Games, Inc	5
Disney	16	San Jose State University	11	Chabot Las Positas Community College District	5
Sony Electronics Inc.	16	Trilyon, Inc	11	Igg Corporation	5
Capital Markets Placement	15	University San Francisco	11	Callisto Media Inc	4
Cisco Systems Inc.	15	Walmart / Sam's	11	Capital Markets Placement	4
Elsa Corporation	15	80Twenty	10	Disney	4

Fast Forward Accelerate Good	14	Activision	10	FedEx	4
Hogarth Worldwide	14	Artisan Creative	10	Mary Frances Accessories	4
IBM	14	Machine Zone	10	Pet Food Express	4
Levi Strauss	14	Milestone Technologies Inc.	10	Sun Chemical	4
Logitech	14	Rodan Fields Llc	10	Z Gallerie	4

Source: *Burning Glass*

## Educational Supply

There are 7 community colleges in the Bay Region issuing 81 awards on average annually (last 3 years) on TOP 0614.00 - Digital Media. There is one college in the East Bay Sub-Region issuing 7 awards on average annually (last 3 years) on this TOP code.

**Table 7. Awards on TOP 0614.00 - Digital Media in the Bay Region**

College	Sub-Region	Headcount	Associates	Certificates	Total
Berkeley City	East Bay	317			
Cabrillo	Santa Cruz & Monterey	405	7	9	16
Chabot	East Bay	153			
Diablo Valley	East Bay	827			
Gavilan	Silicon Valley	14	1	1	2
Hartnell	Santa Cruz & Monterey	172			
Las Positas	East Bay	n/a	6	1	7
San Francisco	Mid-Peninsula	167		20	20
San Jose City	Silicon Valley	11	1	1	2
San Mateo	Mid-Peninsula	727	13	17	30
Skyline	Mid-Peninsula	72			
West Valley	Silicon Valley	59	2	2	4
<b>Total Bay Region</b>		<b>2,924</b>	<b>30</b>	<b>51</b>	<b>81</b>
<b>Total East Bay Sub-Region</b>		<b>1,297</b>	<b>6</b>	<b>1</b>	<b>7</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 labor market gap in the Bay region with 2,015 annual openings for the Digital Media Arts occupational cluster and 81 annual (3-year average) awards for an annual undersupply of 1,934 students. In the East Bay Sub-Region, there is also a gap with 477 annual openings and 7 annual (3-year average) awards for an annual undersupply of 470 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0614.00 - Digital Media**

2015-16	Bay (All CTE Programs)	Chabot College (All CTE Programs)	State (0614.00)	Bay (0614.00)	East Bay (0614.00)	Chabot College (0614.00)
% Employed Four Quarters After Exit	74%	74%	59%	59%	61%	61% (2014-15)
Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$9,425	\$5,036	\$6,920	\$6,097	\$5,978
Median % Change in Earnings	46%	71%	51%	35%	51%	97% (2014-15)
% of Students Earning a Living Wage	63%	60%	35%	38%	35%	n/a

Source: *Launchboard Pipeline (version available on 4/9/19)*

## Skills and Education

**Table 9. Top Skills for Digital Media Arts Occupations in Bay Region (April 2018 - March 2019)**

Skill	Postings	Skill	Postings	Skill	Postings
Adobe Photoshop	3,486	Illustration	561	JavaScript	307
Graphic Design	2,972	User Interface (UI) Design	531	Marketing Materials	306
Adobe InDesign	2,671	UX Wireframes	523	Adobe Premiere	304
Adobe Illustrator	2,209	Digital Design	511	E-Commerce	302
Adobe Acrobat	2,026	Video Editing	492	Video Production	302
Adobe Creative Suite	1,997	Art Direction	463	Digital Marketing	279
Visual Design	1,720	Packaging	461	Print Production	274
Typesetting	1,401	Process Design	420	Videography	274
Web Site Design	864	Motion Graphics	369	Creative Design	240
Adobe Aftereffects	862	Scheduling	349	User Research	240
Social Media	809	Product Design	346	Brand Identity	239
Animation	683	Infographics	340	Retail Industry Knowledge	225
Interaction Design	672	Photography	336	Quality Assurance and Control	218
Prototyping	605	Budgeting	330	Multimedia	216
Project Management	582	Project Design	320	Product Development	213

Source: Burning Glass

**Table 10. Education Requirements for Digital Media Arts Occupations in Bay Region**

Note: 52% 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	105 (4%)
Associate Degree	63 (2%)
Bachelor's Degree or Higher	2,592 (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 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

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