

Multimedia Arts and Video Arts Occupations Labor Market Information Report

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 Multimedia Arts and Video 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). The gap is about 975 students annually in the Bay Region and about 224 annually in the East Bay.

This report also provides student outcomes data on employment and earnings for programs on TOP 0612.20 – Film Production in the region and state. 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 region and state, as well as to outcomes across all CTE programs at Berkeley City College and in the region.

Introduction

This report profiles Multimedia Arts and Video Arts Occupations in the 12 county Bay region and in the East Bay sub-region for review of an existing Multimedia Arts-Video Arts program at Berkeley City College.

- **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%
- **Producers and Directors (SOC 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: 18%
- **Sound Engineering Technicians (SOC 27-4014):** Operate machines and equipment to record, synchronize, mix, or reproduce music, voices, or sound effects in sporting arenas, theater productions, recording studios, or movie and Multimedia Arts.
Entry-Level Educational Requirement: Postsecondary Nondegree Award
Training Requirement: Short-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 46%
- **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: 28%

- **Film and Video Editors (SOC 27-4032):** Edit moving images on film, video, or other media. May edit or synchronize soundtracks with images.
Entry-Level Educational Requirement: Bachelor's Degree
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: 28%

Occupational Demand

Table 1. Employment Outlook for Multimedia Arts and Video Arts Occupations in Bay Region

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Annual Openings	10% Hrly Wage	Median Hrly Wage
Multimedia Artists & Animators	4,361	4,735	375	9%	2,190	438	\$12.63	\$35.44
Producers & Directors	4,232	4,717	485	11%	2,444	489	\$18.88	\$28.71
Sound Engineering Technicians	803	847	44	5%	423	85	\$15.33	\$28.66
Camera Operators, Television, Video & Motion Picture	726	785	59	8%	415	83	\$18.60	\$24.21
Film & Video Editors	1,390	1,580	190	14%	887	177	\$21.30	\$29.67
Total	11,511	12,664	1,153	10%	6,361	1,272	\$16.54	\$31.09

Source: EMSI 2018.2

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 Multimedia Arts and Video Arts Occupations in East Bay Sub-Region

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Annual Openings	10% Hrly Wage	Median Hrly Wage
Multimedia Artists & Animators	708	763	55	8%	342	68	\$11.16	\$24.39
Producers & Directors	756	848	92	12%	441	88	\$17.90	\$24.13
Sound Engineering Technicians	215	224	9	4%	109	22	\$15.04	\$27.78
Camera Operators, Television, Video & Motion Picture	179	199	20	11%	108	22	\$19.12	\$23.18
Film & Video Editors	331	381	51	15%	215	43	\$21.36	\$28.32
Total	2,190	2,416	226	10%	1,216	243	\$16.06	\$25.13

Source: EMSI 2018.2

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 2017 – March 2018)

Occupation	Bay Region	East Bay
Producers (27-2012.01)	855	68
Multimedia Artists and Animators (27-1014.00)	680	51
Sound Engineering Technicians (27-4014.00)	216	10
Camera Operators, Television, Video, and Motion Picture (27-4031.00)	133	10
Program Directors (27-2012.03)	30	5
Directors- Stage, Motion Pictures, Television, and Radio (27-2012.02)	26	2
Talent Directors (27-2012.04)	12	1
Total	1,952	147

Source: Burning Glass

Table 4. Top Job Titles for Multimedia Arts and Video Arts Occupations (April 2017 – March 2018)

Common Title	Bay	East Bay	Common Title	Bay	East Bay
Interaction Designer	416	35	Interactive Designer	31	3
Producer	155	15	Creative Producer	30	0
Associate Producer	105	0	Senior Producer	29	2
Animator	94	2	Video Editor	28	2
Video Producer	56	5	Visual Effects Artist	28	0
Content Producer	37	2	News Producer	25	1

Graphic Designer	35	2	Media Manager	23	2
Videographer	34	1	Systems Engineer	17	0
Executive Producer	33	3	Hardware Engineer	12	0

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Multimedia Arts and Video 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)
Motion Picture and Video Production (512110)	2,809	3,093	10%	24.4%
Internet Publishing and Broadcasting and Web Search Portals (519130)	1,511	1,912	27%	13.1%
Teleproduction and Other Postproduction Services (512191)	680	769	13%	5.9%
Software Publishers (511210)	639	754	18%	5.5%
Television Broadcasting (515120)	610	618	1%	5.3%
Independent Artists, Writers, and Performers (711510)	587	555	(5%)	5.1%
Custom Computer Programming Services (541511)	445	509	14%	3.9%
Cable and Other Subscription Programming (515210)	310	282	(9%)	2.7%
Advertising Agencies (541810)	259	279	8%	2.2%
Computer Systems Design Services (541512)	237	265	12%	2.1%
Theater Companies and Dinner Theaters (711110)	188	205	9%	1.6%
Graphic Design Services (541430)	151	141	(7%)	1.3%
Radio Stations (515112)	134	124	(7%)	1.2%
Public Relations Agencies (541820)	123	133	8%	1.1%

Source: EMSI 2018.2

Table 6. Top Employers for Multimedia Arts and Video Arts Occupations in Bay and East Bay (April 2017 – March 2018)

Employer	Bay	Employer	Bay	Employer	East Bay
Apple Inc.	95	Disney	20	General Electric Company	13
Facebook	51	General Electric Company	20	Pandora Media	6
Google Inc.	46	NBC	19	Invision Communications	5
Intuit	26	Electronic Arts Inc	17	Uc San Diego	5
CBS Broadcasting	23	Take-Two Interactive	16	Accenture	4
Popsugar Inc	22	Gap Inc.	13	Newgig	4
Amazon	21	Hearst Television	11	Ellie Mae, Logitech, Mars Advertising Inc, Tesla Motors	3

Source: Burning Glass

Educational Supply

There are five colleges in the Bay Region issuing 31 awards annually on TOP 0612.20 – Film Production in the Bay Region. There are nine other educational institutions issuing a total of 265 awards annually (227 Bachelor's degrees, 26 Associates and 12 Certificates) on CIP 50.0602 - Cinematography and Film/Video Production. Therefore, the combined total number of awards issued annually for the Bay Region is 296. The total annual awards issued in the East Bay sub-region is 19.

Table 7. Awards on TOP 0612.20 – Film Production or on CIP 50.0602 - Cinematography and Film/Video Production in the Bay Region

College	Sub-Region	Head-count	No. of Transfer Students	Bachelor's	Associates	Certificates	Total
Berkeley City	East Bay	58	n<10	0	0	1	1

Contra Costa	East Bay	63	n<10	0	0	3	3
De Anza	Silicon Valley	249	38	0	11	0	11
Diablo Valley	East Bay	126	0	0	0	0	0
Gavilan	Silicon Valley	15	0	0	0	0	0
San Francisco	Mid-Peninsula	352	43	0	6	0	6
Santa Rosa	North Bay	on another TOP	0	0	5	5	10
West Valley	Silicon Valley	22	0	0	0	0	0
Academy of Art University	Mid-Peninsula	n/a	n/a	115	25	0	140
Argosy University-The Art Institute of California-SF	Mid-Peninsula	n/a	n/a	18	0	0	18
Argosy University-The Art Institute of California-Silicon Valley	Silicon Valley	n/a	n/a	14	0	0	14
California College of the Arts	Mid-Peninsula	n/a	n/a	6	0	0	6
Pacific Union College	North Bay	n/a	n/a	5	1	0	6
SAE Expression College	East Bay	n/a	n/a	15	0	0	15
San Francisco Art Institute	Mid-Peninsula	n/a	n/a	6	0	0	6
San Francisco School of Digital Filmmaking	Mid-Peninsula	n/a	n/a	0	0	12	12
San Francisco State University	Mid-Peninsula	n/a	n/a	48	0	0	48
Total Bay Region		897	82	227	48	21	296
Total East Bay Sub-Region		246	n<10	15	0	4	19

Source: IPEDS, Data Mart and Launchboard

NOTE: Headcount of students who took one or more courses is for 2016-17, and the no. of transfer students is for 2015-16. The annual average for awards is 2014-17. The annual average for other postsecondary is for 2013-16. Colleges with headcount less than 10 in 2016-17 are not shown in the table.

Gap Analysis

Based on all available data, there is a large labor market gap in the Bay region with 1,272 annual openings for the Multimedia Arts and Video Arts cluster of occupations and 296 annual awards (including 227 Bachelor's) for an annual undersupply of 976. In the East Bay sub-region, there is also a gap with 243 annual openings and 19 annual awards (including 15 Bachelor's) for an annual undersupply of 224. Bachelor's degrees are included in the supply numbers since about 92% of the annual openings in the region and sub-region are for occupations which typically require a Bachelor's degree for entry.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0612.20 - Film Production

Note: Student outcomes data is not available for Berkeley City College on this TOP code because of the small number of students taking courses on that TOP code matched to the EDD UI Wage file.

2015-16	Bay (All CTE Programs)	Berkeley City (All CTE Programs)	State (0612.20)	Bay (0612.20)	Top College on 0612.20 in the Bay Region	
% Employed Four Quarters After Exit	74%	54%	68%	62%	San Francisco	65% (66 students)
Median Earnings Two Quarters After Exit	\$10,310	\$7,380	\$4,990	\$8,375	De Anza	De Anza (35 students)
Median % Change in Earnings	46%	32%	60%	29%	De Anza	49% (23 students)
% of Students Earning a Living Wage	63%	45%	56%	39%	De Anza	50% (34 students)

Source: Launchboard (version available on 4/23/18)

Skills, Certificates and Education

Table 9. Top Skills for Multimedia Arts and Video Arts Occupations in Bay Region (April 2017 – March 2018)

Skill	Postings	Skill	Postings	Skill	Postings
Teamwork/Collaboration	668	E-Commerce	183	Photography	104
Adobe Photoshop	515	Graphic Design	174	Human Computer Interaction	96
Project Management	393	Broadcast Industry Knowledge	157	Music	95
Scheduling	351	JavaScript	145	Game Development	94
Budgeting	315	Software Development	144	Omnigraffle	93
Adobe Indesign	272	Process Design	140	Merchandising	87
Interaction Design	267	Product Design	134	Multimedia	86
Video Production	247	User Research	132	Content Management	85
Adobe Acrobat	244	Video Editing	131	Digital Signal Processing (DSP)	85
Adobe Creative Suite	241	Quality Assurance and Control	128	Videography	79
UX Wireframes	231	Facebook	127	Customer Service	78
Adobe Illustrator	225	Customer Contact	125	Media Production	77
Visual Design	225	Product Management	122	Motion Graphics	75
Prototyping	219	Product Development	121	Project Planning and Development Skills	72
Social Media	215	Adobe Premiere	118	Staff Management	70
User Interface (UI) Design	212	Information Architecture	111	Audio / Visual Knowledge	69
Animation	196	Maya	107	Software Engineering	69
Adobe Aftereffects	186	Journalism	106	Youtube	69

Source: Burning Glass

Table 10. Certifications for Multimedia Arts and Video Arts Occupations in the Bay Region (April 2017 - March 2018)

Note: 96% of records have been excluded because they do not include a certification. As a result, the chart has not been included in this report.

Table 11. Education Requirements for Multimedia Arts and Video Arts Occupations in Bay Region

Note: 44% 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	38 (4%)
Associate Degree	17 (1%)
Bachelor's Degree or Higher	1,012 (95%)

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 CCCC 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

Contacts

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