



HARTNELL COLLEGE

## PROGRAM DISCONTINUANCE/REVITALIZATION

Date: 12 February 2017

The following request is to initiate program Revitalization, Suspension, or Discontinuance:

**Program Name: Computer Science and Information Systems – Digital and Web Design Option (Associate Degree, Certificate)**

- Refer to AP 4021 for guidelines in completion of this request form.
- Criteria: multiple indicators are required and must be supported by the findings reported in the program's annual or comprehensive Program Planning and Assessment Review and Action Plan
- This request form shall be presented to the Academic Affairs Council for consideration. If the Academic Affairs Council approves the request, the request will be forwarded to the Academic Senate for consideration.
- If the Academic Senate approves the request, the Vice President of Academic Affairs will convene a program evaluation committee per the composition outlined in AP 4021. The program evaluation committee will make recommendations regarding program discontinuance or revitalization.

### **MULTIPLE INDICATORS (please check multiple indicators below and be prepared to explain each)**

Declining market/industry demand

No Advisory Committee

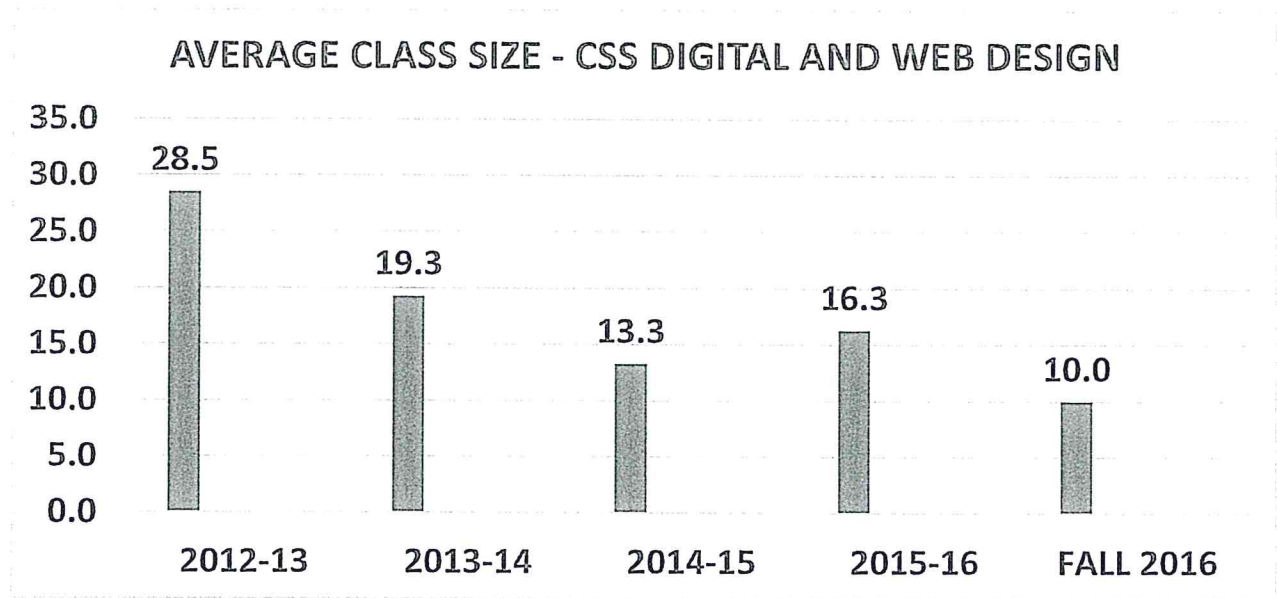
**No evidence can be found of any meetings of an advisory committee.**

External state regulatory agency recommendation

- × Decreasing enrollment trends (low or decreasing WSCH/FTEF) **see attached**
- Poor term-to-term persistence for those students in courses in the major
- Outdated curriculum
- Outdated equipment and/or facilities and replacement creates a financial hardship for the College
- × Poor rate for student achievement of program goals (e.g. completion rate, numbers of degrees and Certificates, job placement) **Only 1 degree has been awarded since fall 2010 and no certificates have been awarded (see attached)**
- Decline in importance of program outcomes to related disciplines (applies primarily when discipline does not offer a degree or certificate)
- Change in transfer requirements and/or declining university transfer trends
- Insufficient frequency of course offerings to assure reasonable opportunity for completion of the program within its stated duration
- Lack of available resources, no full time faculty
- × Poor success and retention within program courses **see attached**
- Unavailability of the transfer major
- Program creates a financial hardship for the College
- × Changes in community/student needs or interests **see attached (tied to decline in enrollment)**
- Diminished grant or outside funding resources
- Other:

## AVERAGE CLASS SIZE - CSS DIGITAL AND WEB DESIGN

		2012-13	2013-14	2014-15	2015-16	FALL 2016
AVERAGE CLASS SIZE		28.5	19.3	13.3	16.3	10.0

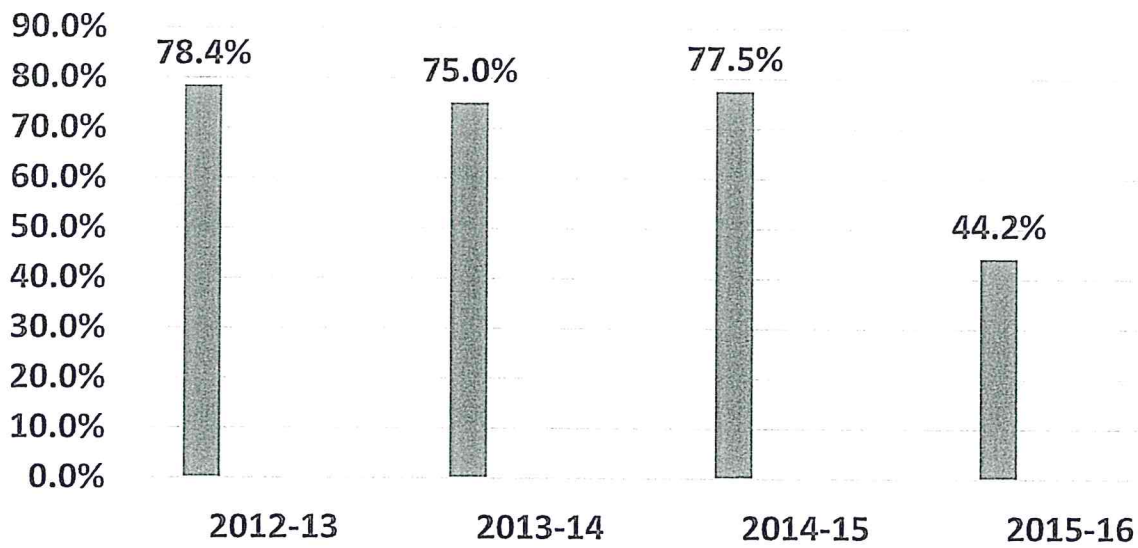


## COURSE RETENTION - CSS DIGITAL AND WEB DESIGN

		2012-13	2013-14	2014-15	2015-16
RETENTION		78.4%	75.0%	77.5%	44.2%

SECTION HEADING: FOCUS ON STUDENT SUCCESS LEADS TO INCREASE IN COMPLETION OF DEGREES AND CERTIFICATES

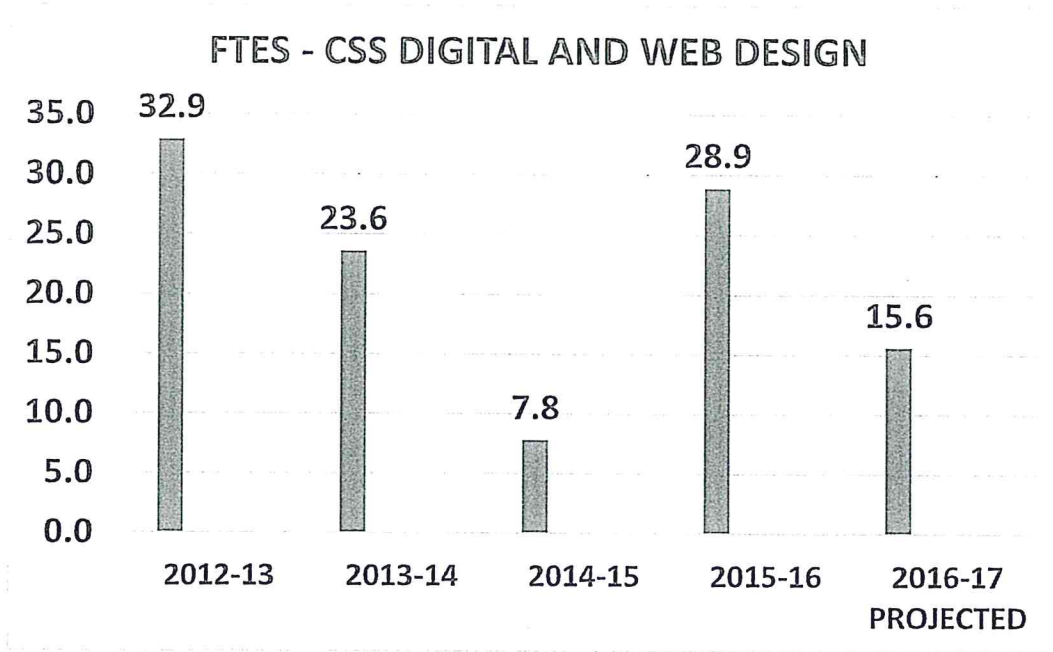
## COURSE RETENTION - CSS DIGITAL AND WEB DESIGN



## FTES - CSS DIGITAL AND WEB DESIGN

	2012-13	2013-14	2014-15	2015-16	2016-17 PROJECTED
FTES	32.9	23.6	7.8	28.9	15.6

SECTION HEADING: FOCUS ON STUDENT SUCCESS LEADS TO INCREASE IN COMPLETION OF DEGREES AND CERTIFICATES



**COMPUTER SCIENCE AND INFORMATION SYSTEMS**  
**DIGITAL WEB AND MOBILE DEVELOPMENT (AS.DWMD)**

397 unduplicated students have chosen an AS.DWD or CT.DWD Program of Study since June 2015.

191 students have chosen an AS.DWD, and 213 students have chosen a CT.DWD Program of Study since June 2015.

Required Major Courses:		Units	Enrollment					TOTAL
			2015	2016	2017	2018	2019	
BUS 32	Intro to Bus	3						
CSS 25	Multimedia Integration	3	14	8			14	36
CSS 27	Project Mangagement using Microsoft Project	4		9		2		11
CSS 64	HTML 5 and CSS3-Web Development	4				8		8
<b>Major Electives A (Complete 8 units)</b>								
CSS 26	Dreamweaver	4				7		7
CSS 74	Wordpress for Websites	4				10	5	15
CSS 76	Android App Development Using Java	4					2	2
CSS 86	Flash Design	4						
<b>Major Electives B (Complete and additional 8 units)</b>								
CSS 29	Programming for Multimedia	4						
CSS 76*	Android App Development Using Java	4					2	2
CSS 65	Introduction to IOS App Development	4					16	16
CSS 78	Mobile Game Design	4		18	16		18	52
CSS 84	Beginning Digital Cartooning in Flash	4	15					15
		<b>Totals</b>	<b>29</b>	<b>35</b>	<b>16</b>	<b>27</b>	<b>57</b>	<b>164</b>
			Per year					

\* Duplicate course

SEMESTER

(All)

## DIGITAL WEB AND MOBILE DEVELOPMENT Program of Study Profile

Course	ENROLLED	RETAINED	Retained Ratio	PASSED	Passed Ratio
<b>CSS-25</b>	<b>36</b>	<b>20</b>	<b>55.6%</b>	<b>14</b>	<b>38.9%</b>
2015FA	14	3	21.4%	1	7.1%
2016FA	8	7	87.5%	5	62.5%
2019SP	14	10	71.4%	8	57.1%
<b>CSS-26</b>	<b>7</b>	<b>7</b>	<b>100.0%</b>	<b>2</b>	<b>28.6%</b>
2018FA	7	7	100.0%	2	28.6%
<b>CSS-27</b>	<b>11</b>	<b>9</b>	<b>81.8%</b>	<b>8</b>	<b>72.7%</b>
2016FA	9	9	100.0%	8	88.9%
2018FA	2	0	0.0%	0	0.0%
<b>CSS-29</b>	<b>42</b>	<b>21</b>	<b>50.0%</b>	<b>14</b>	<b>33.3%</b>
2016SP	18	8	44.4%	7	38.9%
2017SP	16	6	37.5%	3	18.8%
2019SP	8	7	87.5%	4	50.0%
<b>CSS-64</b>	<b>8</b>	<b>4</b>	<b>50.0%</b>	<b>3</b>	<b>37.5%</b>
2018SP	8	4	50.0%	3	37.5%
<b>CSS-65</b>	<b>16</b>	<b>14</b>	<b>87.5%</b>	<b>12</b>	<b>75.0%</b>
2019SP	16	14	87.5%	12	75.0%
<b>CSS-74</b>	<b>10</b>	<b>9</b>	<b>90.0%</b>	<b>9</b>	<b>90.0%</b>
2018SP	10	9	90.0%	9	90.0%
<b>CSS-78</b>	<b>34</b>	<b>8</b>	<b>23.5%</b>	<b>3</b>	<b>8.8%</b>
2016SP	18	2	11.1%	1	5.6%
2017SP	16	6	37.5%	2	12.5%
<b>CSS-84</b>	<b>15</b>	<b>3</b>	<b>20.0%</b>	<b>2</b>	<b>13.3%</b>
2015FA	15	3	20.0%	2	13.3%
	<b>179</b>	<b>95</b>	<b>56.5%</b>	<b>65</b>	<b>44.2%</b>

COMPUTER SCIENCE AND INFORMATION SYSTEMS—DIGITAL AND WEB DESIGN OPTION—ASSOCIATE OF SCIENCE DEGREE  
COMPUTER SCIENCE AND INFORMATION SYSTEMS—DIGITAL AND WEB DESIGN OPTION—CERTIFICATE OF ACHIEVEMENT

ENT

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**PROGRAM IS CURRENTLY BEING REVISED FOR THE 2018-2019 ACADEMIC YEAR.**

PLEASE CONTACT THE FOLLOWING FACULTY FOR MORE INFORMATION:

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Violetta Wenger at (831) 755-6828, [vwenger@hartnell.edu](mailto:vwenger@hartnell.edu), Alisal Campus, AC-A110

SEE PAGE 173 FOR

**COMPUTER SCIENCE AND INFORMATION SYSTEMS (CSS) COURSES**



# Multimedia Content Creation Occupations Labor Market Information Report City College of San Francisco

Prepared by the San Francisco Bay Center of Excellence  
for Labor Market Research  
May 2019

## Recommendation

Based on all available data, there appears to be a significant undersupply of Multimedia Content Creation workers compared to the demand for this cluster of occupations in the Bay region and in the Mid-Peninsula sub-region (San Francisco and San Mateo Counties). The gap is about 150 students annually in the Bay region and 85 students annually in the Mid-Peninsula sub-region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0614.10 - Multimedia 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 City College of San Francisco and in the region.

## Introduction

This report profiles Multimedia Content Creation Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for a proposed new program at City College of San Francisco.

- **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: 28%*
- **Media and Communication Workers, All Other (SOC 27-3099):** All media and communication workers not listed separately.  
*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%*

## Occupational Demand

**Table 1. Employment Outlook for Multimedia Content Creation 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
Film and Video Editors	1,628	1,782	154	9%	961	192	\$20.02	\$30.11
Media and Communication Workers, All Other	1,063	1,127	63	6%	552	110	\$13.29	\$22.42
<b>Total</b>	<b>2,692</b>	<b>2,909</b>	<b>217</b>	<b>8%</b>	<b>1,513</b>	<b>303</b>	<b>\$17.36</b>	<b>\$27.07</b>

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

Multimedia Content Creation Occupations in 12 County Bay Region and in Mid-Peninsula Sub-Region, 2018

**Table 2. Employment Outlook for Multimedia Content Creation Occupations in Mid-Peninsula Sub-Region**

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Annual Openings	10% Hourly Wage	Median Hourly Wage
Film and Video Editors	701	758	57	8%	397	79	\$18.91	\$29.85
Media and Communication Workers, All Other	247	269	22	9%	137	27	\$15.15	\$25.86
<b>TOTAL</b>	<b>948</b>	<b>1,027</b>	<b>79</b>	<b>8%</b>	<b>534</b>	<b>107</b>	<b>\$17.93</b>	<b>\$28.81</b>

Source: EMSI 2018.4

Mid-Peninsula Sub-Region includes San Francisco and San Mateo Counties

**Job Postings in Bay Region and Mid-Peninsula Sub-Region****Table 3. Number of Job Postings by Occupation for latest 12 months (Nov 2017 - Oct 2018)**

Occupation	Bay Region	Mid-Peninsula
Film and Video Editors (27-4032.00)	165	111

Source: Burning Glass

**Table 4. Top Job Titles for Multimedia Content Creation Occupations for latest 12 months (Nov 2017 - Oct 2018)**

Common Title	Bay	Mid-Peninsula	Common Title	Bay	Mid-Peninsula
Video Editor	153	106	Devops Engg	1	
Devops Engingeer	2	2	Editor, Travel	1	1
Video Editing Manager	2		Housesitter, Studio,Apartment	1	
Assembling	1		Technology Reporter	1	1
Assembling A	1		Watching My Kids	1	1
Associate, Creative,Editing	1				

Source: Burning Glass

**Industry Concentration****Table 5. Industries hiring Multimedia Content Creation 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)	835	848	9%	31.1%
Internet Publishing and Broadcasting and Web Search Portals (519130)	259	267	36%	9.8%
Teleproduction and Other Postproduction Services (512191)	193	195	5%	7.2%
Television Broadcasting (515120)	96	96	0%	3.5%
Colleges, Universities, and Professional Schools (State Government) (902612)	88	90	10%	3.3%
Colleges, Universities, and Professional Schools (611310)	86	88	12%	3.2%
Cable and Other Subscription Programming (515210)	62	63	(11%)	2.3%
All Other Professional, Scientific, and Technical Services (541990)	52	55	19%	2.0%
Colleges, Universities, and Professional Schools (Local Government) (903612)	56	55	(5%)	2.0%
Local Government, Excluding Education and Hospitals (903999)	38	39	5%	1.4%
Federal Government, Military (901200)	37	36	(3%)	1.3%
Promoters of Performing Arts, Sports, and Similar Events with Facilities (711310)	37	36	5%	1.3%

Blank Magnetic and Optical Recording Media Manufacturing (334613)	31	31	(10%)	1.1%
Corporate, Subsidiary, and Regional Managing Offices (551114)	29	30	0%	1.1%
Photography Studios, Portrait (541921)	29	29	(17%)	1.1%
Data Processing, Hosting, and Related Services (518210)	26	28	31%	1.0%
Independent Artists, Writers, and Performers (711510)	28	27	(7%)	1.0%

Source: EMSI 2018.4

**Table 6. Top Employers Posting Multimedia Content Creation Occupations in Bay Region and Mid-Peninsula Sub-Region (Nov 2017 - Oct 2018)**

Employer	Bay	Employer	Bay	Employer	Mid-Peninsula
Electronic Arts Incorporated	4	Fandor	2	Edelman	3
Ivalua	4	Fast Forward Accelerate Good	2	Edelman Berland	3
Edelman	3	Hellomd	2	Electronic Arts Incorporated	3
Edelman Berland	3	J2 Global	2	Orangepeople	3
Orangepeople	3	Jam Ca	2	Deloitte	2
Thirdlove	3	Mw Partners	2	Doctor On Demand	2
Apple Inc.	2	On24 Incorporated	2	Fast Forward Accelerate Good	2
Cypress Hcm	2	Pandora Media	2	Ivalua	2
Deloitte	2	Paypal	2	J2 Global	2
Doctor On Demand	2	Steyer Content	2	Jam Ca	2

Source: Burning Glass

## Educational Supply

There are eight community colleges in the Bay Region issuing 153 awards on average annually on TOP 0614.10 – Multimedia. City College of San Francisco is the only college in the Mid-Peninsula sub-region issuing awards on this TOP code, issuing 22 awards on average annually.

**Table 7. Awards on TOP 0614.10 - Multimedia in the Bay Region**

College	Sub-Region	Headcount	Associates	Certificates	Total
Berkeley	East Bay	306	5	42	47
Canada	East Bay	161	7	4	11
Foothill	Silicon Valley	1,025			
Diablo Valley	East Bay	n/a	11	6	17
Gavilan	Monterey SC	10			
Hartnell	Monterey SC	38	10	9	19
Marin	North Bay	86	3	3	6
Ohlone	East Bay	162	5	9	14
San Francisco	Mid Peninsula	46		22	22
San Jose	Silicon Valley	28			
Santa Rosa	North Bay	280	8	9	17
West Valley	Silicon Valley	13			
<b>Total Bay Region</b>			<b>49</b>	<b>104</b>	<b>153</b>
<b>Total Mid-Peninsula Sub-Region</b>		<b>46</b>	<b>0</b>	<b>22</b>	<b>22</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 large labor market gap in the Bay region with 303 annual openings for the Multimedia Content Creation occupational cluster and 153 annual awards for an annual undersupply of 150 students. In the Mid-Peninsula sub-region, there is also a gap with 107 annual openings and 22 annual awards for an annual undersupply of 85 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0614.10 - Multimedia**

2015-16	Bay (All CTE Programs)	City College of San Francisco (All CTE Programs)	State (TOP 0614.10)	Bay (TOP 0614.10)	Mid-Peninsula (TOP 0614.10)	City College of San Francisco (TOP 0614.10)
% Employed Four Quarters After Exit	75%	73%	55%	53%	59%	76%
Median Quarterly Earnings Two Quarters After Exit	\$13,996	\$10,170	\$12,435	\$14,631	\$20,563	\$25,626
Median % Change in Earnings	40%	50%	68%	65%	51%	41%
% of Students Earning a Living Wage	63%	55%	34%	38%	59%	n/a

Source: Launchboard Pipeline (version available on 11/14/18)

## Skills and Education

**Table 9. Top Skills for Multimedia Content Creation Occupations in Bay Region (Nov 2017 - Oct 2018)**

Skill	Postings	Skill	Postings	Skill	Postings
Video Editing	146	Animation	30	Cinematography	8
Adobe Aftereffects	100	Facebook	18	Scheduling	8
Adobe Premiere	84	Youtube	18	Social Media Tools	8
Adobe Photoshop	82	Audio mixing	16	Transcoding	8
Video Production	48	Post Production	15	Typesetting	8
Final Cut Pro	41	Instagram	14	Cinema 4D	7
Adobe Indesign	40	Photography	14	Metadata	7
Adobe Illustrator	38	Sound Design	14	Social Media Platforms	7
Social Media	38	Project Management	13	Art Direction	6
Color Editing	37	Graphic Design	12	Business Development	6
Adobe Acrobat	36	Multimedia	11	Content Management	6
Adobe Creative Suite	36	Videography	11	Film Production	6
Music	36	Budgeting	10	Maya	6
Broadcast Industry Knowledge	31	Audio Editing	9	Technical Support	6
Motion Graphics	31	Avid Media Composer	8	3D computer graphics	5

Source: Burning Glass

**Table 10. Education Requirements for Multimedia Content Creation Occupations in Bay Region**

Note: 67% 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
Associate Degree	6 (11%)
Bachelor's Degree or Higher	48 (89%)

Source: Burning Glass

Multimedia Content Creation Occupations in 12 County Bay Region and in Mid-Peninsula Sub-Region, 2018

## 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/](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
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