

**Program Endorsement Brief: 0614.00/Digital Media
Media Arts**

Los Angeles/Orange County Center of Excellence, November 2020

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met	<input type="checkbox"/>	Endorsed: Some Criteria Met	<input checked="" type="checkbox"/>	Not Endorsed	<input type="checkbox"/>
Program Endorsement Criteria						
Supply Gap:	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Living Wage: (Entry-Level, 25th)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Education:	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>		
Emerging Occupation(s)						
Yes <input type="checkbox"/>			No <input checked="" type="checkbox"/>			

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to five middle-skill occupations: *Audio and Video Technicians (27-4011)*, *Camera Operators, Television, Video, and Film (27-4031)*, *Film and Video Editors (27-4032)*, *Media and Communication Workers, All Other (27-3099)*, and *Special Effects Artists and Animators (27-1014)*. Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree.¹ Although *camera operators, television, video, and film; film and video editors; and special effects artists and animators* typically require a bachelor’s degree, they are considered middle-skill occupations because approximately one-third of workers in the field have completed some college or an associate degree. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

Also included in this report is supply and demand data for both Riverside and San Bernardino counties. While the labor market information and community college data for these two additional counties is listed in this report, *the program endorsement is based solely upon the supply and demand data for Los Angeles and Orange counties.*

Based on the available data, there appears to be a supply gap for media arts occupations in the LA/OC region. **Due to some of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

¹ The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor’s degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

Demand:

- **Supply Gap Criteria** - Over the next five years, there are projected to be **4,847 jobs available annually** in the LA/OC region due to job growth and replacements, **which is more than the 775 awards conferred annually** by educational institutions in the region.
- **Living Wage Criteria** - Within Los Angeles County, **all of the annual job openings** for these media arts occupations have **entry-level wages above the county's living wage** (\$15.04/hour).²
- **Education Criteria** - Within the LA/OC region, **61% of the annual job openings** for occupations related to media arts **typically require a bachelor's degree**.
 - However, national-level educational attainment data indicates **that between 25.4% and 42.4% of workers in the field have completed some college or an associate degree**.

Supply:

- There are **24 community colleges** in the LA/OC region that have conferred awards related to media arts – an average of **616 awards annually** between 2016 and 2019.
- Between 2014 and 2017, there was an average of **159 awards conferred annually** in related training programs by non-community college institutions throughout the LA/OC region.

Occupational Demand

Exhibit 1 displays the five-year occupational demand projections for media arts occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 7% through 2024. There will be more than 4,800 job openings per year through 2024 due to job growth and replacements in the LA/OC region.

Occupational demand projections for these media arts occupations for Riverside and San Bernardino Counties are also included in this report (Exhibit 2). The number of jobs related to these occupations is projected to increase by 7% through 2024, and there will be more than 200 job openings per year through 2024 due to job growth and replacements.

This report includes employment projection data by Emsi which uses EDD information. Emsi's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

² Living wage data was pulled from California Family Needs Calculator on 10/26/2020. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	37,125	39,586	2,461	7%	4,466
Orange	3,156	3,348	192	6%	380
Total	40,281	42,934	2,653	7%	4,847

Exhibit 2: Occupational demand in Riverside and San Bernardino Counties

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Riverside	1,075	1,169	94	9%	137
San Bernardino	875	920	45	5%	104
Total	1,950	2,089	139	7%	241

Wages—The labor market endorsement in this report considers the entry-level hourly wages for these media arts occupations in Los Angeles County as they relate to the county’s living wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Wages for Riverside and San Bernardino counties are also included below. Detailed wage information, by county, is included in Appendix A.

Los Angeles County—All of the annual openings for these occupations have entry-level wages above the living wage for one adult (\$15.04 in Los Angeles County).⁴ Typical entry-level hourly wages are in a range between \$17.84 and \$25.47. Experienced workers can expect to earn wages between \$39.88 and \$70.52, which are higher than the living wage estimate.

Orange County—Approximately 13% of the annual openings for these occupations have entry-level wages above the living wage for one adult (\$17.36 in Orange County). Typical entry-level hourly wages are in a range between \$13.91 and \$20.11. Experienced workers can expect to earn hourly wages between \$36.07 and \$60.28, well above the living wage estimate.

Riverside and San Bernardino counties – The majority of annual openings, 80%, for these occupations have entry-level wages above the living wage for one adult in both counties (\$11.97 in Riverside County and \$11.63 in San Bernardino County).⁵ Typical entry-level hourly wages are in a range between \$7.55 and \$18.30. Experienced workers can expect to earn wages between \$32.77 and \$46.93, which are higher than the living wage estimate.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁴ Living wage data was pulled from California Family Needs Calculator on 10/26/2020. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

⁵ Ibid.

Job Postings—Over the last twelve months, there were 2,166 job advertisements for these five media arts occupations in Los Angeles/Orange County. The job titles with the most postings were video editor, freelance videographer, motion graphic designer, videographer, and audio-visual technician. The top skills were: Adobe Photoshop, Adobe Aftereffects, video editing, animation, and Maya. The top employers, by the number of job postings, in the region were: Activision Blizzard Entertainment, Kalo, Sony, Disney, and PSAV Presentation Services.

It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists the following typical entry-level education requirements for the media arts occupations in this report:

- **Bachelor’s degree:** *film and video editors (27-4032), special effects artists and animators (27-1014), and camera operators, television, video, and film (27-4031)*
- **Postsecondary nondegree award:** *audio and video technicians (27-4011)*
- **High school diploma or equivalent:** *media and communication workers, all other (27-3099)*

In the LA/OC region, the majority of annual job openings (61%) for the media arts occupations typically require a bachelor’s degree. However, the national-level educational attainment data indicates between 25.4% and 42.4% of workers in the field have completed some college or an associate degree as their highest level of education. Of the 32% of media arts job postings listing a minimum education requirement in Los Angeles/Orange County, 23% (161) requested a high school diploma, 5% (33) requested an associate degree, and 72% (505) requested a bachelor’s degree.

Educational Supply

Community College Supply—Exhibit 3 displays the annual and three-year average number of awards conferred by LA/OC regional community colleges in the related TOP codes: Radio and Television (0604.00), Television (including combined TV/Film/Video) (0604.20), Film Production (0612.20), and Digital Media (0614.00). The colleges with the most completions in the region are: Saddleback, LA City, and LA Valley. Over the past 12 months, there were two other related program recommendation requests from LA/OC regional community colleges.

Exhibit 3: Regional community college awards (certificates and degrees), 2016-2019

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
0604.00	Radio and Television	LA Valley	10	14	16	13
		Long Beach	6	10	4	7
		Mt San Antonio	-	-	2	1
		Santa Monica	19	27	8	18
		LA Subtotal	35	51	30	39

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		Fullerton	-	2	3	2
		Saddleback	69	40	206	105
		Santa Ana	-	-	5	2
		Santiago Canyon	-	2	-	1
		OC Subtotal	69	44	214	109
Supply Subtotal/Average			104	95	244	148
0604.20	Television (including combined TV/Film/Video	Compton	3	2	-	2
		El Camino	19	20	20	20
		Glendale	8	2	8	6
		LA City	96	56	39	64
		LA Pierce	-	5	11	5
		LA Valley	30	20	29	26
		Long Beach	-	9	39	16
		Mt San Antonio	16	21	48	28
		Pasadena	4	9	25	13
		LA Subtotal	176	144	219	180
		Cypress	-	-	3	1
		Fullerton	24	27	56	36
		Orange Coast	-	5	19	8
		Saddleback	6	6	2	5
		Santa Ana	5	11	14	10
		OC Subtotal	35	49	94	59
Supply Subtotal/Average			211	193	313	239
0612.20	Film Production	Cerritos	5	6	10	7
		LA City	58	34	61	51
		LA Valley	12	10	42	21
		Long Beach	-	4	3	2
		Santa Monica	24	27	40	30
		West LA	29	37	33	33
		LA Subtotal	128	118	189	145
		Orange Coast	36	48	49	44
		Saddleback	7	9	7	8
		OC Subtotal	43	57	56	52
Supply Subtotal/Average			171	175	245	197
0614.00	Digital Media	East LA	1	-	-	0
		LA Mission	-	-	1	0
		LA Trade	-	7	19	9
		Long Beach	-	1	-	0

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		LA Subtotal	1	8	20	10
		Coastline	-	-	3	1
		Golden West	13	9	10	11
		Irvine	8	15	9	11
		OC Subtotal	21	24	22	22
		Supply Subtotal/Average	22	32	42	32
		Supply Total/Average	508	495	844	616

Exhibit 4 shows the three-year average number of awards conferred by Riverside and San Bernardino regional community colleges in the related TOP codes: Radio and Television (0604.00), Television (including combined TV/Film/Video) (0604.20), Film Production (0612.20), and Digital Media (0614.00).

Exhibit 4: Regional community college awards (certificates and degrees), 2016-2019 – Riverside and San Bernardino Counties

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
0604.00	Radio and Television	Chaffey	14	19	13	15
		San Bernardino	4	5	3	4
		Supply Subtotal/Average	18	24	16	19
0604.20	Television (including combined TV/Film/Video)	Chaffey	26	41	38	35
		Desert	-	1	8	3
		Mt. San Jacinto	-	-	2	1
		Riverside	13	34	27	25
		San Bernardino	-	4	2	2
		Supply Subtotal/Average	39	80	77	65
0612.20	Film Production	Chaffey	19	38	31	29
		Desert	-	-	1	0
		San Bernardino	9	3	5	6
		Supply Subtotal/Average	28	41	37	35
0614.00	Digital Media	Mt. San Jacinto	6	7	23	12
		Palo Verde	13	12	12	12
		Riverside	14	20	27	20
		Supply Subtotal/Average	33	39	62	45
		Supply Total/Average	118	184	192	165

Exhibit 5 displays strong workforce program outcome metrics for the digital media programs in the LA/OC region, Riverside and San Bernardino Counties, and California.

Exhibit 5: Strong workforce program metrics for digital media programs

Strong Workforce Program Metrics (2017-18, unless noted otherwise)	Los Angeles/ Orange County	Riverside and San Bernardino Counties	California
Unduplicated count of enrolled students (2018-19)	3,432	957	9,491
Median annual earnings	\$25,092	\$22,336	\$25,260
Median change in earnings	21%	37%	32%
Students who attained the living wage	33%	41%	35%
Job closely related to field of study (2016-17)	59%	54%	54%

Non-Community College Supply—It is important to consider the supply from non-community college institutions in the region that provide training programs related to media arts. Exhibit 6 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Program (CIP) Code: Animation, Interactive Technology, Videos Graphics, and Special Effects (10.304). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, non-community colleges in the region conferred an average of 159 awards annually in related training programs. Please note that all three of Argosy University’s campuses in the region, Hollywood, Los Angeles, and Orange County, closed on March 9th, 2019.

Exhibit 6: Regional non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
10.0304	Animation, Interactive Technology, Video Graphics, and Special Effects	Argosy University-The Art Institute of California-Hollywood	8	2	1	4
		Argosy University-The Art Institute of California-Los Angeles	7	3	2	4
		Argosy University-The Art Institute of California-Orange County	13	9	3	8
		Art Center College of Design	17	28	28	24
		Gnomon School of Visual Effects	17	29	36	27

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
		Laguna College of Art and Design	7	22	22	17
		Los Angeles Film School	43	19	11	24
		Loyola Marymount University	18	22	12	17
		Mt Sierra College	7	5	3	5
		New York Film Academy	26	26	28	27
		Shepherd University	1	2	1	1
Supply Total/Average			164	167	147	159

Non-Community College Supply—Exhibit 7 displays the annual and three-year average number of awards conferred by Riverside and San Bernardino counties institutions in the related Classification of Instructional Program (CIP) Code: Animation, Interactive Technology, Videos Graphics, and Special Effects (10.304). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, non-community colleges in the region conferred an average of 37 awards annually in related training programs.

Exhibit 7: Riverside and San Bernardino counties non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
10.0304	Animation, Interactive Technology, Video Graphics, and Special Effects	California Baptist University	43	26	43	37
Supply Total/Average			43	26	43	37

Appendix A: Occupational demand and wage data by county
Exhibit 8. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Film and Video Editors (27-4032)	11,176	12,074	898	8%	1,320	\$25.47	\$39.92	\$70.52
Audio and Video Technicians (27-4011)	8,129	8,707	578	7%	1,016	\$18.44	\$25.74	\$39.88
Special Effects Artists and Animators (27-1014)	7,468	7,917	449	6%	930	\$21.69	\$38.28	\$59.05
Media and Communication Workers, All Other (27-3099)	5,797	5,986	189	3%	667	\$18.06	\$27.55	\$40.58
Camera Operators, Television, Video, and Film (27-4031)	4,555	4,902	347	8%	533	\$17.84	\$29.31	\$48.76
Total	37,125	39,586	2,461	7%	4,466			

Exhibit 9. Orange County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Audio and Video Technicians (27-4011)	1,114	1,201	87	8%	140	\$16.68	\$23.27	\$36.07
Special Effects Artists and Animators (27-1014)	794	826	32	4%	94	\$13.91	\$28.42	\$48.26
Media and Communication Workers, All Other (27-3099)	612	633	21	3%	71	\$16.72	\$25.69	\$37.95
Film and Video Editors (27-4032)	395	435	40	10%	48	\$20.11	\$33.88	\$60.28
Camera Operators, Television, Video, and Film (27-4031)	241	253	12	5%	27	\$14.88	\$25.32	\$43.29
Total	3,156	3,348	192	6%	380			

Exhibit 10. Los Angeles and Orange counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education	On-The-Job Training & Work Experience
Film and Video Editors (27-4032)	11,571	12,509	938	8%	1,369	Bachelor's degree	None & None
Audio and Video Technicians (27-4011)	9,243	9,908	665	7%	1,157	Postsecondary nondegree award	1 month & None
Special Effects Artists and Animators (27-1014)	8,262	8,743	481	6%	1,024	Bachelor's degree	None & None
Media and Communication Workers, All Other (27-3099)	6,409	6,619	210	3%	738	HS diploma or equivalent	1 month & None
Camera Operators, Television, Video, and Film (27-4031)	4,796	5,155	359	7%	560	Bachelor's degree	None & None
Total	40,281	42,934	2,653	7%	4,847		

Exhibit 11. Riverside County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Audio and Video Technicians (27-4011)	396	435	39	10%	52	\$15.50	\$22.59	\$32.45
Media and Communication Workers, All Other (27-3099)	232	245	13	6%	28	\$13.94	\$25.25	\$35.54
Special Effects Artists and Animators (27-1014)	231	244	13	6%	28	\$7.20	\$16.99	\$32.28
Film and Video Editors (27-4032)	129	151	22	17%	18	\$18.40	\$30.94	\$45.78
Camera Operators, Television, Video, and Film (27-4031)	88	95	7	8%	10	\$13.10	\$23.16	\$33.76
Total	1,075	1,169	94	9%	137			

Exhibit 12. San Bernardino County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Audio and Video Technicians (27-4011)	343	357	14	4%	40	\$16.15	\$23.48	\$33.74
Media and Communication Workers, All Other (27-3099)	203	207	4	2%	23	\$14.26	\$26.12	\$36.75
Special Effects Artists and Animators (27-1014)	166	174	8	5%	20	\$7.94	\$18.23	\$33.46
Film and Video Editors (27-4032)	94	108	14	15%	13	\$18.20	\$35.58	\$48.49
Camera Operators, Television, Video, and Film (27-4031)	69	74	5	7%	8	\$15.03	\$26.25	\$38.82
Total	875	920	45	5%	104			

Exhibit 13. Riverside and San Bernardino counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education	On-The-Job Training & Work Experience
Audio and Video Technicians (27-4011)	738	792	54	7%	92	Postsecondary nondegree award	1 month & None
Media and Communication Workers, All Other (27-3099)	435	452	17	4%	51	HS diploma or equivalent	1 month & None
Special Effects Artists and Animators (27-1014)	397	418	21	5%	49	Bachelor's degree	None & None
Film and Video Editors (27-4032)	223	258	35	16%	31	Bachelor's degree	None & None
Camera Operators, Television, Video, and Film (27-4031)	157	169	12	8%	19	Bachelor's degree	None & None
Total	1,950	2,089	139	7%	241		

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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