

Labor Market Analysis: 0614.00/Digital Media

Digital Media: Drone Cinematography - Certificate requiring 8 to fewer than 16 semester units
Los Angeles Center of Excellence, November 2023

Summary

Program Endorsement:	Endorsed: All Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some Criteria Met <input 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>	

The Los Angeles Center of Excellence for Labor Market Research (LA COE) prepared this report to provide regional labor market supply and demand data related to three middle-skill occupations:

- **Photographers (27-4021)** Photograph people, landscapes, merchandise, or other subjects. May use lighting equipment to enhance a subject's appearance. May use editing software to produce finished images and prints. Includes commercial and industrial photographers, scientific photographers, and photojournalists.¹
- **Camera Operators, Television, Video, and Film (27-4031)** Operate television, video, or film camera to record images or scenes for television, video, or film productions.²
- **Film and Video Editors (27-4032)** Edit moving images on film, video, or other media. May work with a producer or director to organize images for final production. May edit or synchronize soundtracks with images.³

Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.⁴ Although two of the occupations in this report typically require a bachelor's degree, they are considered middle-skill 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.

¹ [Photographers \(bls.gov\)](#)

² [Film and Video Editors and Camera Operators \(bls.gov\)](#)

³ [Film and Video Editors and Camera Operators \(bls.gov\)](#)

⁴ 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.

Based on the available data, there appears to be a supply gap for these digital media occupations in the region. Furthermore, the majority of annual openings for these occupations in Los Angeles County have entry-level wages that exceed the self-sufficiency standard wage, and more than one-third of current workers in the field have completed an associate degree or less education. **Therefore, due to all the criteria being met, the LA COE endorses this proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, **3,284 jobs are projected to be available annually** in the region due to new job growth and replacements, **which is more than the three-year average of 2,993 awards conferred** by educational institutions in the region.
 - Over the past 12 months, **there were 33 online job postings for the occupations in this report that also listed drone pilot certification (FAA certification).**
- **Living Wage Criteria** – Within Los Angeles County, the majority (66%) of annual job openings for these digital media occupations have **entry-level wages above the self-sufficiency standard hourly wage (\$18.10/hour).**⁵
- **Educational Criteria** – Within the greater LA/OC region, **61% of the annual job openings** for occupations in this report **typically require a bachelor's degree.**
 - However, the national-level educational attainment data indicates **between 36% and 47% of workers in the field have completed some college/associate degree or less education.**

Supply:

- There are **23 community colleges** in the greater LA/OC region that issue awards related to digital media, conferring an average of **998 awards annually** between 2019 and 2022.
- Between 2019 and 2021, there was an average of **1,995 awards conferred annually** in related training programs by non-community college institutions throughout the greater LA/OC region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for the occupations of interest. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 12% through 2026. There will be nearly 3,300 job openings per year through 2027 due to job growth and replacements. It is important to note that these occupations include all types of photographers, camera operators, and film editors and not solely drone cinematographers. Therefore, the data in Exhibit 1 is likely overstated for drone-specific digital media producers.

⁵ Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties⁶

Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	25,268	28,378	3,110	12%	2,931
Orange	3,099	3,437	338	11%	353
Total	28,368	31,815	3,448	12%	3,284

Wages

The labor market endorsement in this report considers the entry-level hourly wages for these digital media occupations in Los Angeles County as they relate to the county’s self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County

The majority (66%) of annual openings for these occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages are in a range between \$15.97 and \$23.77. Two occupations in this report have entry-level wages above the county’s self-sufficiency standard: *Film and video editors* (\$23.77) and *camera operators, television, video, and film* (\$21.47). Experienced workers can expect to earn wages between \$38.91 and \$58.11, which are higher than the self-sufficiency standard.

Exhibit 2: Earnings for Occupations in LA County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Photographers (27-4021)	\$15.97	\$28.05	\$48.52	\$58,300
Camera Operators, Television, Video, and Film (27-4031)	\$21.47	\$36.13	\$38.91	\$75,100
Film and Video Editors (27-4032)	\$23.77	\$33.88	\$58.11	\$70,500

*Rounded to the nearest \$100

Orange County

The majority (87%) of annual openings for these occupations have entry-level wages below the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages are in a range between \$14.93 and \$20.70. One occupation in this report has entry-level wages above the county’s self-sufficiency standard: *Film and video editors* (\$20.70). Experienced workers can expect to earn wages between \$38.04 and \$54.12, which are higher than the self-sufficiency standard.

⁶ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

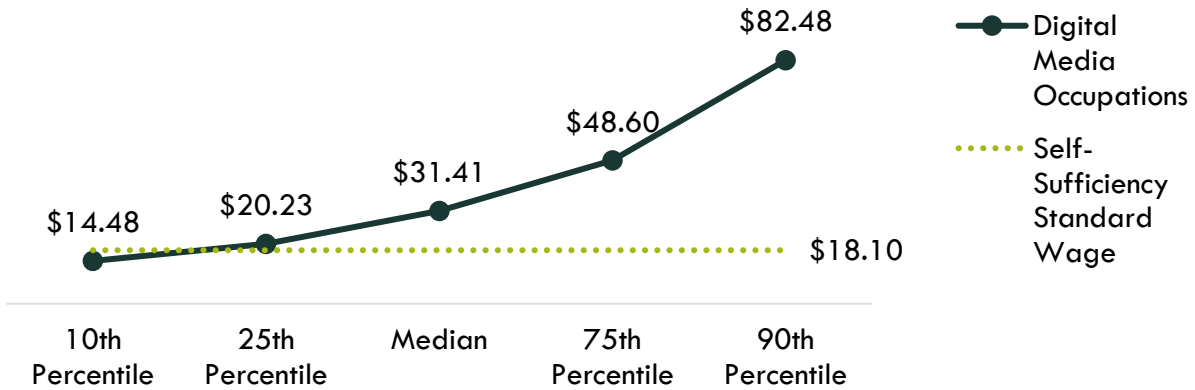
Exhibit 3: Earnings for Occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Photographers (27-4021)	\$14.93	\$26.94	\$48.81	\$56,000
Camera Operators, Television, Video, and Film (27-4031)	\$18.14	\$31.63	\$38.04	\$65,800
Film and Video Editors (27-4032)	\$20.70	\$30.53	\$54.12	\$63,500

*Rounded to the nearest \$100

On average, the entry-level earnings for the occupations in this report are \$20.23; this is above the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 4 shows the average wage for the occupations in this report, from entry-level to experienced workers.

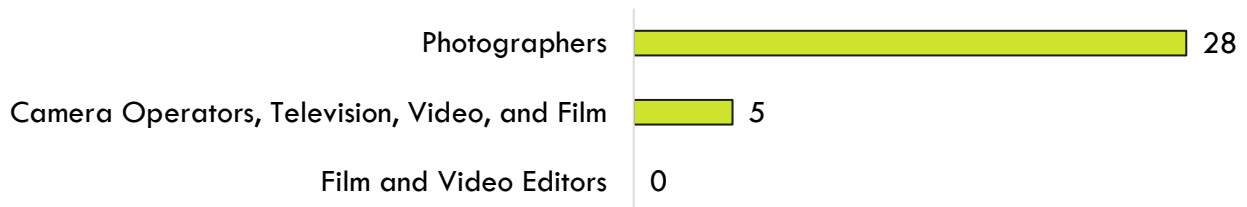
Exhibit 4: Average Hourly Earnings for Digital Media Occupations in LA/OC



Job Postings

There were **33 online job postings** for the occupations in this report that also listed **drone pilot certification (FAA certification)** posted in the past 12 months. Exhibit 5 displays the number of job postings by occupation. The majority of job postings (85%) were for *photographers*, followed by *camera operators, television, video, and film* (15%). The highest number of job postings were for architectural photographers, photographers, real estate photographers, research photographers, and videographers. The top skills were photography, videography, Adobe Premiere Pro, Adobe Photoshop Lightroom, and digital single-lens reflex cameras. All 33 job postings listed a drone pilot certificate as a qualification for employment. The top employers, by number of job postings, in the region CoStar Group and Zillow Group, both in real estate.

Exhibit 5: Job postings by occupation (last 12 months)



Educational Attainment

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

- **Bachelor's degree:** *Camera operators, television, video and film; Film and video editors*
- **High school diploma or equivalent:** *Photographers*

In the greater LA/OC region, the majority of annual job openings (61%) typically require a bachelor's degree. However, the national-level educational attainment data indicates between 36% and 47% of workers in the field have completed some college/associate degree or less education. Of the 55% of drone-related cinematography job postings listing a minimum education requirement in the greater Los Angeles/Orange County region, 67% (12) requested high school or vocational training, no postings requested an associate degree, and 33% (6) requested a bachelor's degree.

Educational Supply

Community College Supply

Exhibit 6 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for the occupations of interest. The colleges with the most completions in the region are Saddleback, LA City, and Santa Monica.

Exhibit 6: Regional community college awards (certificates and degrees), 2019-2022

TOP	Program	College	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
0604.00	Radio and Television	LA Valley	17	12	9	13
		Long Beach	2	2	7	4
		Santa Monica	29	16	8	18
		LA Subtotal	48	30	24	34
		Fullerton	-	2	1	1
		Saddleback	136	98	144	126
		OC Subtotal	136	100	145	127
Supply Subtotal/Average			184	130	169	161
0604.20	Television (including combined TV/film/video)	Cerritos	-	5	13	6
		El Camino	22	27	32	27
		Glendale	14	17	25	19
		LA City	34	45	35	38
		LA Pierce	26	29	31	29
		LA Valley	31	42	48	40
		Long Beach	35	42	49	42
		Mt San Antonio	54	34	50	46
		Pasadena	45	65	51	54

TOP	Program	College	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
		LA Subtotal	261	306	334	300
		Cypress	15	16	20	17
		Fullerton	48	52	55	52
		Orange Coast	40	22	46	36
		Saddleback	2	-	15	6
		Santa Ana	17	6	13	12
		OC Subtotal	122	96	149	122
Supply Subtotal/Average			383	402	483	423
0612.20	Film Production	Cerritos	8	11	22	14
		LA City	62	45	116	74
		LA Valley	31	35	54	40
		Santa Monica	59	41	45	48
		West LA	7	28	10	15
		LA Subtotal	167	160	247	191
		Orange Coast	48	26	32	35
		Saddleback	3	-	-	1
		OC Subtotal	51	26	32	36
Supply Subtotal/Average			218	186	279	228
0614.00	Digital Media	Glendale	1	-	-	0
		LA Mission	4	5	5	5
		LA Trade-Tech	11	18	12	14
		Pasadena	-	3	15	6
		Rio Hondo	2	1	1	1
		Santa Monica	-	-	19	6
		LA Subtotal	18	27	52	32
		Coastline	-	3	3	2
		Cypress	-	2	7	3
		Golden West	10	7	-	6
		Irvine	1	6	3	3
		Saddleback	-	1	1	1
		Santa Ana	1	6	34	14
		OC Subtotal	12	25	48	28
Supply Subtotal/Average			30	52	100	61
1012.00	Applied Photography	East LA	5	1	-	2
		El Camino	10	7	10	9

TOP	Program	College	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
		Glendale	6	5	6	6
		LA City	38	5	8	17
		LA Pierce	2	3	2	2
		LA Valley	-	-	3	1
		Mt San Antonio	31	10	32	24
		Pasadena	5	1	10	5
		Santa Monica	37	33	31	34
		LA Subtotal	134	65	102	100
		Cypress	5	2	2	3
		Fullerton	11	4	5	7
		Orange Coast	18	21	10	16
		OC Subtotal	34	27	17	26
		Supply Subtotal/Average	168	92	119	126
		Supply Total/Average	983	862	1,150	998

Non-Community College Supply

For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for these digital media occupations. Exhibit 7 shows the annual and three-year average number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent three-year period of available data is from 2019 to 2021. Between 2019 and 2021, non-community college institutions in the region conferred an average of 1,995 bachelor's and sub-baccalaureate awards. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards. Of the awards listed in Exhibit 7, the majority (88%) are bachelor's awards, while 12% are sub-baccalaureate awards. Bachelor's awards are included, since some of the occupations in this report typically require a bachelor's degree. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards.

Exhibit 7: Regional non-community college awards, 2019-2021

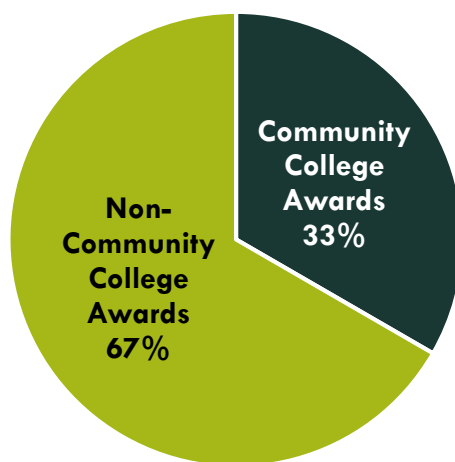
CIP	Program	Institution	2019-20 Awards	2020-21 Awards	2-Year Average
09.0701	Radio and Television	CSU-Fullerton	189	185	187
		CSU-Los Angeles	154	147	151
		CSU-Northridge	396	427	412
		Loyola Marymount Univ.	-	1	1
		Pepperdine University	20	11	16

CIP	Program	Institution	2019-20 Awards	2020-21 Awards	2-Year Average
		University of La Verne	7	11	9
09.0702	Digital Communication and Media/ Multimedia	CSU-Dominguez Hills	41	57	49
		Columbia College Hollywood	-	28	14
		Fremont College	1	-	1
		Marymount California Univ.	10	9	10
		Vanguard University of Southern California	2	1	2
10.0201	Photographic and Film/ Video Technology/ Technician	Chapman University	-	1	1
10.0202	Radio and Television Broadcasting Technology/ Technician	Hollywood Cultural College	20	12	16
50.0102	Digital Arts	Columbia College Hollywood	-	15	8
		Gnomon	-	31	16
		LA Academy of Figurative Art	4	-	2
		Los Angeles Pacific College	4	2	3
		Marymount California University	3	2	3
		Otis College of Art and Design	48	52	50
		USC	15	37	26
		Woodbury University	2	-	1
50.0602	Cinematography and Film/Video Production	Art Center College of Design	18	24	21
		Biola University	56	56	56
		CA Institute of the Arts	14	11	13
		Chapman University	146	101	124
		Columbia College Hollywood	-	105	53
		Fashion Institute of Design & Merchandising-LA	12	10	11
		Los Angeles Film School	245	255	250
		Loyola Marymount Univ.	79	64	72

CIP	Program	Institution	2019-20 Awards	2020-21 Awards	2-Year Average
		Mount Saint Mary's Univ.	14	14	14
		New York Film Academy	215	181	198
		USC	114	96	105
		Woodbury University	15	17	16
50.0699	Film/Video and Photographic Arts, Other	California Institute of the Arts	-	2	1
		Los Angeles Film School	49	97	73
		Woodbury University	10	25	18
Supply Total/Average			1,903	2,087	1,995

Exhibit 8 shows the proportion of community college awards conferred in LA/OC compared to the number of non-community college awards for the programs in this report. One out of three awards conferred in these programs are awarded by community colleges in the LA/OC region.

Exhibit 8: Community College Awards Compared to Non-Community College Awards in LA/OC Region, 3-Year Average



Appendix A: Occupational demand and wage data by county

Exhibit 9. Los Angeles County

Occupation (SOC)	2022 Jobs	2027 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Photographers (27-4021)	8,356	9,408	1,053	13%	990	\$15.97	\$28.05	\$48.52
Camera Operators, Television, Video, and Film (27-4031)	5,580	6,218	638	11%	631	\$21.47	\$36.13	\$38.91
Film and Video Editors (27-4032)	11,332	12,752	1,419	13%	1,310	\$23.77	\$33.88	\$58.11
Total	25,268	28,378	3,110	12%	2,931	-	-	-

Exhibit 10. Orange County

Occupation (SOC)	2022 Jobs	2027 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Photographers (27-4021)	2,297	2,606	309	13%	278	\$14.93	\$26.94	\$48.81
Camera Operators, Television, Video, and Film (27-4031)	348	353	5	2%	31	\$18.14	\$31.63	\$38.04
Film and Video Editors (27-4032)	455	478	23	5%	44	\$20.70	\$30.53	\$54.12
Total	3,099	3,437	338	11%	353	-	-	-

Exhibit 11. Los Angeles and Orange Counties

Occupation (SOC)	2022 Jobs	2027 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	% Age 55 and older*	Typical Entry-Level Education
Photographers (27-4021)	10,653	12,015	1,362	13%	1,267	22%	HS diploma or equivalent
Camera Operators, Television, Video, and Film (27-4031)	5,928	6,571	643	11%	663	22%	Bachelor's degree
Film and Video Editors (27-4032)	11,787	13,229	1,442	12%	1,355	23%	Bachelor's degree
Total	28,368	31,815	3,448	12%	3,284	-	-

*The average percentage of workers age 55 and older across all occupations in the greater LA/OC region is 27%. These occupations have a smaller share of older workers, which typically indicates fewer replacements needs to offset the amount of impending retirements.

Appendix B: Sources

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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