Program Endorsement Brief: 0614.10/Multimedia
Entertainment Art
Orange County Center of Excellence, October 2019

Summary Analysis

The 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 one middle-skill occupation: Multimedia Artists and Animators (SOC code 27-1014) and one emerging occupation: Video Game Designers (SOC code 15-1199.11). Middle-skill occupations typically require some postsecondary education, but not a bachelor's degree.[1] Because Video Game Designers is an emerging occupation, traditional labor market information for this occupation is grouped under the broader Computer Occupations, All Other (15-1199) occupation, which includes several emerging occupations. Therefore, the number of annual job openings for Video Game Designers is overstated. While both of these occupations typically require a bachelor's degree, they are considered middle-skill because, according to the Bureau of Labor Statistics (BLS), approximately one-third of workers in the field nationally 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 relevant occupations.

Based on the available data, it appears that there is an undersupply of labor for these occupations in the region. ==Therefore, the COE endorses this proposed program for the following reasons:==

Demand:

- Over the next five years, there is projected to be **2,230 jobs available annually** in the region due to retirements and workers leaving the field, **which is more than the 208 awards conferred annually** by educational institutions in the region.
  - However, the Computer Occupations, All Other (15-1199) SOC code includes a variety of emerging occupations, including video game designers. Since the SOC code does not solely represent video game designers, *the number of annual job openings is likely overstated for game artists and designers.*
- ==Over the past 12 months, there were **2,523 online job postings related to these occupations throughout the region.** The highest number of job postings were for animator, graphic designer, game designer, visual effects artist, interaction designer, and FX artist.==
  - ==However, of the 34% (857) of job postings listing a minimum education requirement in Los Angeles/Orange County, 89% (760) requested a bachelor's degree. *Only 8.5% requested less than a bachelor's degree* (6.1% [33] requested a==

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[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.

Supply:

- There are **eight community college**s in the region that have a multimedia program, conferring an average of **29 awards annually** between 2015 and 2018.
- Between 2013 and 2016, there was an average of **179 awards conferred annually** in related training programs by non-community college institutions, all of which were generated by **nine individual four-year colleges and universities** throughout the region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for these two occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 3% through 2023. There will be 2,230 job openings per year through 2023 due to retirements and workers leaving the field. It is important to note that the Computer Occupations, All Other (15-1199) SOC code includes a variety of emerging occupations, including video game designers, database architects, web administrators, and other computer occupations. Since the SOC code does not solely represent video game designers, the data in Exhibit 1 is overstated for game artists and designers.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties[2]

Geography	2018 Jobs	2023 Jobs	2018-2023 Change	2018-2023 % Change	Annual Openings
Los Angeles	21,713	22,332	619	3%	1,662
Orange	7,230	7,602	372	5%	568
Total	**28,942**	**29,934**	**992**	**3%**	**2,230**

Wages—Typical entry-level hourly wages for these occupations throughout the region are between $21.82 and $26.92.[3] Typical entry-level wages for these occupations are higher than the California Family Needs Calculator hourly wage for one adult in the region ($15.04 in Los Angeles County and $17.36 in Orange County).[4] Typically, experienced workers earn between $48.49 and $54.47, which is higher than the California Family Needs Calculator wage estimates for both counties. Regional average wages are lower than the average statewide wage of $47.61 for these occupations. Wage information, by county, is included in Appendix A.

Job Postings—There were 2,523 online job postings related to these occupations listed in the region over the past 12 months. The highest number of job postings were for animator, graphic designer, game designer, visual effects artist, interaction designer, and FX artist. The top

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

[3] Entry-level wage is defined as the twenty-fifth percentile hourly wage. Wages for experienced workers are defined as the seventy-fifth percentile hourly wage.

[4] Living wage data was pulled from California Family Needs Calculator on 10/21/19. For more information, visit the California Family Needs Calculator website: https://insightcced.org/2018-family-needs-calculator/.

Educational Attainment—The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for both occupations in this report. However, the national-level educational attainment data indicates that between 27.8% and 35.2% of workers in the field have completed some college or an associate degree. Of the 34% of job postings listing a minimum education requirement in Los Angeles/Orange County, 89% (760) requested a bachelor's degree, 6.1% (33) requested a high school diploma or vocational training, and 2.4% (13) requested an associate degree.

Supply

Community College Supply—Exhibit 2, on the following page, shows the three-year average number of awards conferred by community colleges in the related TOP code: Multimedia (0614.10). Cumulatively, the eight community colleges in the region with multimedia programs have conferred an average of 29 awards annually over the past three years. The college with the most completions was LA Mission. Over the past 12 months, there was one other related program recommendation request from regional community colleges.

Exhibit 2: Regional community college awards (certificates and degrees), 2015-2018

TOP Code	Program	College	2015-16 Awards	2016-17 Awards	2017-2018 Awards	3-Year Award Average
0614.10	Multimedia	East LA	1	-	-	0
		LA Mission	18	8	12	13
		Long Beach	1	1	1	1
		Pasadena	3	1	5	3
		Santa Monica	3	6	5	5
		LA Total	**26**	**16**	**23**	**22**
		Cypress	-	1	1	1
		Orange Coast	-	3	-	1
		Santiago Canyon	3	3	10	5
		OC Total	**3**	**7**	**11**	**7**
		Overall Total/Average	**29**	**23**	**34**	**29**

Non-Community College Supply— Exhibit 3 shows the annual and three year average number of awards conferred by non-community college institutions, which in this case are all four-year colleges and universities, in the related Classification of Instructional Programs (CIP) Codes: Animation, Interactive Technology, Video Graphics and Special Effects (10.0304) and Game and Interactive Media Design (50.0411). Due to different data collection periods, the most recent

three-year period of available data is 2013 to 2016. ==Between 2013 and 2016, four-year colleges conferred an average of 179 awards annually in related training programs.==

Exhibit 3: Regional non-community college awards, 2013-2016

CIP Code	Program	College	2013-14 Awards	2014-15 Awards	2015-16 Awards	3-Year Award Average
10.0304	Animation, Interactive Technology, Video Graphics and Special Effects	Art Center College of Design	0	17	28	15
		Loyola Marymount University	18	18	22	19
		Mt Sierra College	8	7	5	7
		LA Total	**26**	**42**	**55**	**41**
		Argosy University-The Art Institute of California-Orange County	8	13	9	10
		Laguna College of Art and Design	11	7	22	13
		OC Total	**19**	**20**	**31**	**23**
		Supply Total/Average	**45**	**62**	**86**	**64**
50.0411	Game and Interactive Media Design	Art Center College of Design	8	0	0	3
		Mt Sierra College	12	16	19	16
		University of Southern California	22	29	26	26
		Woodbury University	0	0	11	4
		LA Total	**42**	**45**	**56**	**48**
		Argosy University-The Art Institute of California-Orange County	16	13	13	14
		Chapman University	0	1	0	0
		Laguna College of Art and Design	19	17	29	22
		University of California-Irvine	13	38	43	31
		OC Total	**48**	**69**	**85**	**67**
		Supply Total/Average	**90**	**114**	**141**	**115**
		GRAND TOTAL/AVERAGE	**135**	**176**	**227**	**179**

Appendix A: Occupational demand and wage data by county

Exhibit 4. Los Angeles County

Occupation (SOC)	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer Occupations, All Other (15-1199)	15,348	15,985	637	4%	1,159	$27.20	$40.00	$55.06
Multimedia Artists and Animators (27-1014)	6,364	6,347	(17)	(0.26%)	503	$22.42	$34.80	$48.93
Total	**21,713**	**22,332**	**619**	**3%**	**1,662**			

Exhibit 5. Orange County

Occupation (SOC)	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer Occupations, All Other (15-1199)	6,708	7,054	346	5%	521	$26.29	$38.61	$53.14
Multimedia Artists and Animators (27-1014)	521	548	27	5%	47	$14.36	$27.01	$41.41
Total	**7,230**	**7,602**	**372**	**5%**	**568**			

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer Occupations, All Other (15-1199)	22,057	23,039	982	4%	1,680	$26.92	$39.57	$54.47
Multimedia Artists and Animators (27-1014)	6,885	6,895	10	0%	550	$21.82	$34.26	$48.49
Total	**28,942**	**29,934**	**992**	**3%**	**2,230**			

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
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- 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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