

Program Endorsement Brief: 1006.00/Technical Theater Technical Theater – Entertainment Technology Level 1 Costume Design Level 1

Los Angeles/Orange County Center of Excellence, April 2020

Summary Analysis

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 one middle-skill occupation (sound engineering technicians (27-4014)) and one above middle-skill occupation (set and exhibit designers (27-1027)). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.¹ Although set and exhibit designers typically require a bachelor's degree, appropriate programs have historically set community college students on the pathway towards this above middle-skill occupation. 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.

Based on the available data, there appears to be an **oversupply for these occupations** in the region. However, since **this report considers the supply from seven programs that have historically trained for the occupations of interest and these programs are broad, the number of qualified student completers may be overstated.** Therefore, the COE **cautiously endorses** this proposed program. Reasons include:

Demand:

- Over the next five years, there is projected to be **903 jobs available annually** in the region due to replacements (e.g. retirements and workers leaving the field).
- The national-level educational attainment data indicates that **between 29.0% and 44.1%** of workers in the field have completed some college or an associate degree.
- Typical entry-level hourly wages for technical theater-related occupations throughout the region are between \$16.21 and \$17.46. These wages are above the California Family Needs Calculator hourly wage for one adult in Los Angeles County (\$15.04), but not in Orange County (\$17.36).²

Supply:

- Between 2016 and 2019, community colleges in the region conferred **an average of 1,275 awards annually** in related programs.

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.

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

- Between 2013 and 2016, non-community college institutions the region conferred an average of **1,184 awards annually** in related programs.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for the two technical theater-related occupations analyzed in this report. In Los Angeles/Orange County, the number of new jobs related to these occupations is projected to decrease slightly through 2024. Despite this, there will be 903 job openings per year through 2024, due to replacements (e.g. retirements and workers leaving the field).

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	7,481	7,412	(69)	(1%)	796
Orange	938	980	42	4%	107
Total	8,419	8,392	(27)	(0%)	903

Wages — Typical entry-level hourly wages for technical theater-related occupations throughout the region are between \$16.21 and \$17.46.⁴ These wages are above the California Family Needs Calculator hourly wage for one adult in Los Angeles County (\$15.04), but not in Orange County (\$17.36).⁵ Median wages for the two occupations of interest are between \$26.46 and \$30.45 per hour. Wage information, by county, is included in Appendix A.

Sound Engineering Technician Job Postings — There have been 408 online job postings related to sound engineering technicians listed in the past 12 months. The highest number of job postings were for applications engineer – audio products, sound designer, engineer, theater technician, and sound mixer. The top skills were: broadcast industry knowledge, audio systems, audio engineering, digital signal processing (DSP), and sound design. The top three employers, by number of job postings, in the region were: Extron Electronics, Live Nation Worldwide, and Blizzard Entertainment. Of the 408 online job postings, 49% list a minimum education requirement.

Set and Exhibit Designer Job Postings — In the past 12 months, there have been 27 online job postings for set and exhibit designers listed in the region. The highest number of job postings were for exhibit specialist, set and exhibit designer, set designer, and set dresser. The top specialized were budgeting, set design, painting, customer service, and art direction. Only one employer posted more than one job ad for set and exhibit designers: the OC Fair and Event Center. Employers who only posted one online advertisement for this occupation include the National

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 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.

⁵ Living wage data was pulled from California Family Needs Calculator. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Broadcasting Company (NBC), American Academy of Dramatic Arts, and Upstage Theatre Schools. Of the 27 online job postings, 30% listed a minimum education requirement.

Educational Attainment — The Bureau of Labor Statistics (BLS) lists a postsecondary certificate as the typical entry-level education for sound engineering technicians. National-level educational attainment data indicates that 44.1% of workers in the field have completed some college or an associate degree. Of the 49% of middle-skill job postings listing a minimum education requirement in Los Angeles/Orange County, 25% (49) requested high school or vocational training, 5% (10) requested an associate degree, and 70% (140) requested a bachelor’s degree.

The Bureau of Labor Statistics (BLS) lists a bachelor’s degree as the typical entry-level education for set and exhibit designers. BLS data indicates that 29% of the above middle-skill technical theater workers have completed some college or an associate degree as their highest level of education. Of the 30% of online job postings listing a minimum education requirement in Los Angeles/Orange County, 38% (3) requested a high school or vocational training and 62% (5) requested a bachelor’s degree.

Supply

Community College Supply — Exhibit 2 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for either of the two occupations of interest. The colleges with the most completions in the region are: LA City, Saddleback, and Mt. San Antonio. During the last twelve months, there were two other related program recommendation requests from regional community colleges.

Exhibit 2: Regional community college awards, 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
		Fullerton	-	2	3	2
		Saddleback	69	40	206	105
		Santa Ana	-	-	5	2
		Santiago Canyon	-	2	-	1
		OC Subtotal	69	44	214	109
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

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		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
		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
		Subtotal/Average	171	175	245	197
0614.40	Animation	Cerritos	4	3	7	5
		East LA	3	6	14	8
		El Camino	-	1	5	2
		Glendale	4	6	2	4
		LA Mission	4	4	8	5
		Mt. San Antonio	19	53	67	46
		Pasadena	-	-	2	1
		Rio Hondo	11	11	11	11
		Santa Monica	12	17	9	13
		LA Subtotal	57	101	125	94
		Cypress	9	3	7	6
		Fullerton	-	1	-	0
		Irvine	-	1	1	1
		Santa Ana	5	2	15	7
		OC Subtotal	14	7	23	15
		Subtotal/Average	71	108	148	109
1005.00	Commercial Music	Cerritos	4	9	3	5
		Citrus	40	58	58	52
		Glendale	-	3	-	1
		LA City	212	183	313	236
		LA Harbor	9	2	6	6
		LA Valley	18	21	7	15

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		Long Beach	7	4	-	4
		LA Subtotal	290	280	387	319
		Cypress	13	15	9	12
		Fullerton	12	6	5	8
		Irvine	-	-	1	0
		Orange Coast	7	3	7	6
		Saddleback	1	11	7	6
		Santa Ana	2	5	7	5
		OC Subtotal	35	40	36	37
		Subtotal/Average	325	320	423	356
1006.00	Technical Theater	Citrus	4	9	5	6
		East LA	-	10	7	6
		LA City	20	-	38	19
		LA Pierce	10	12	12	11
		LA Valley	6	2	4	4
		Long Beach	-	1	-	0
		Mt. San Antonio	-	-	1	0
		Pasadena	-	2	4	2
		Santa Monica	11	16	17	15
		LA Subtotal	51	52	88	64
		Cypress	6	3	3	4
		Fullerton	22	10	11	14
		Golden West	3	-	-	1
		Irvine	5	2	3	3
		Orange Coast	-	-	1	0
		Saddleback	1	2	-	1
		Santa Ana	1	3	1	2
		OC Subtotal	38	20	19	26
		Subtotal/Average	89	72	107	89
1302.00	Interior Design and Merchandising	LA Mission	3	7	5	5
		Mt. San Antonio	16	19	36	24
		Santa Monica	15	30	15	20
		LA Subtotal	34	56	56	49
		Fullerton	15	34	12	20
		Orange Coast	32	34	43	36
		Saddleback	6	32	58	32
		OC Subtotal	53	100	113	89
		Subtotal/Average	87	156	169	138
		Supply Total/Average	1,058	1,119	1,649	1,275

Non-Community College Supply — It is important to consider the supply from non-community college institutions in the region that provide training programs for relevant occupations. Exhibit 3 shows the annual and three-year average number of awards conferred by institutions in the related Classification of Instructional Programs (CIP) Code: Radio and Television (090.0701), Recording Arts Technology/Technician (10.0203), Animation, Interactive Technology, Video Graphics and Special Effects (10.0304), Technical Theatre/Theatre Design and Technology (50.0502), and Cinematography and Film/Video Production (50.0602).

Due to different data collection periods, the most recent three-year period of available data is from 2013 to 2016. Between 2013 and 2016, non-community colleges in the region conferred an average of 1,184 awards annually in the related training programs.

Exhibit 3: Regional Non-Community College awards, 2013-2016

CIP Code	Program	College	2013-2014 Awards	2014-2015 Awards	2015-2016 Awards	3-Year Award Average
09.0701	Radio and Television	The Academy of Radio and TV Broadcasting	36	11	20	22
Subtotal/Average			36	11	20	22
10.0203	Recording Arts Technology/Technician	Los Angeles Film School	611	320	214	382
		Musicians Institute	219	171	184	191
		SAE Institute of Technology-Los Angeles	96	166	120	127
Subtotal/Average			926	657	518	700
10.0304	Animation, Interactive Technology, Video Graphics and Special Effects	Gnomon School of Visual Effects	28	17	29	25
		Laguna College of Art and Design	-	-	1	0
		Los Angeles Film School	49	43	19	37
		New York Film Academy	14	25	25	21
Subtotal/Average			91	85	74	83
50.0502	Technical Theatre/Theatre Design and Technology	Pepperdine University	-	2	5	2
		University of Southern California	11	6	7	8
		Chapman University	-	-	1	1
		Vanguard University of Southern California	2	2	-	1
Subtotal/Average			13	10	13	12
50.0602	Cinematography and Film/Video Production	FIDM-Fashion Institute of Design & Merchandising-Los Angeles	23	21	10	18
		Los Angeles Film School	344	217	181	247
		New York Film Academy	81	108	113	101
Subtotal/Average			448	346	304	366
Supply Total/Average			1,514	1,109	929	1,184

Appendix A: Occupational demand and wage data by county

Exhibit 4. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Sound Engineering Technicians (27-4014)	3,906	3,773	(133)	(3%)	413	\$17.55	\$30.61	\$50.96
Middle-Skill Subtotal	3,906	3,773	(133)	(3%)	413			
Set and Exhibit Designers (27-1027)	3,575	3,639	64	2%	383	\$16.77	\$26.94	\$40.59
Above Middle-Skill Subtotal	3,575	3,639	64	2%	383			
Total	7,481	7,412	(69)	(1%)	796			

Exhibit 5. Orange County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Sound Engineering Technicians (27-4014)	301	311	10	3%	35	\$16.33	\$28.40	\$46.88
Middle-Skill Subtotal	301	311	10	3%	35			
Set and Exhibit Designers (27-1027)	637	669	32	5%	72	\$13.01	\$22.95	\$38.26
Above Middle-Skill Subtotal	637	669	32	5%	72			
Total	938	980	42	4%	107			

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Sound Engineering Technicians (27-4014)	4,207	4,084	(123)	(3%)	448	\$17.46	\$30.45	\$50.65
Middle-Skill Subtotal	4,207	4,084	(123)	(3%)	448			
Set and Exhibit Designers (27-1027)	4,212	4,308	96	2%	455	\$16.21	\$26.46	\$40.28
Above Middle-Skill Subtotal	4,212	4,308	96	2%	455			
Total	8,419	8,392	(27)	(0%)	903			

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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