

Program Endorsement Brief: 1006.00/Technical Theater
Advanced Technical Theater Certificate
Assistant Stage Manager Certificate
 Orange County Center of Excellence, May 2021

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, 25 th)	Yes <input type="checkbox"/>	No <input checked="" 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 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 for six occupations related to technical theater. To illuminate which occupations are immediately accessible to community college graduates, these technical theater occupations have been divided into middle-skill and above middle-skill occupation groups. Middle-skill occupations typically accommodate community college graduates, while above middle-skill occupations typically require a four-year degree and/or prior work experience. The occupations included in the **middle-skill** technical theater occupation group are: *audio and video technicians (27-4011)*, *sound engineering technicians (27-4014)*, *lighting technicians and media and communication equipment workers, all other (27-4098)*, and *riggers (49-9096)*. The occupations in the **above middle-skill** technical theater group are: *set and exhibit designers (27-1027)* and *producers and directors (27-2012)*. This report is intended to help determine whether there is middle-skill occupational 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 a supply gap for the middle-skill group of technical theater occupations in the region. While the majority of annual openings for the middle-skill occupations in this report typically require a postsecondary non-degree award, the majority of annual openings have entry-level wages below the living wage in Orange County. **Therefore, due to some of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **2,378 middle-skill jobs available annually** in the region due to retirements and workers leaving the field, **which is more than the 130 awards conferred annually** by educational institutions in the region.
 - However, the lighting technicians and media and communication equipment workers, all other (27-4098) SOC code includes a variety of emerging

occupations, including *lighting technicians*. Since the SOC code does not solely represent technical theater occupations, **the number of annual job openings is likely overstated.**

- Over the past 12 months, there were **2,702 online job postings related to these technical theater occupations**. The highest number of job postings were for producers, associate producers, executive producers, digital producers, and creative producers.
- **Living Wage Criteria** – Within Orange County, **the majority (55%) of annual job openings for these technical theater occupations have entry-level wages below the county's living wage** (\$17.36/hour).¹
- **Educational Criteria** – Within the LA/OC region, **59% of the annual middle-skill job openings** for occupations related to technical theater **typically require a postsecondary non-degree award**.
 - Furthermore, the national-level educational attainment data indicates **between 39% and 43.4% of workers in the field have completed some college or an associate degree.**

Supply:

- There are **17 community colleges** in the LA/OC region that issue awards related to technical theater, conferring an average of **85 awards annually** between 2017 and 2020.
- Between 2016 and 2019, there was an average of **45 awards conferred annually** in related training programs by non-community college institutions throughout the region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for the middle-skill group of technical theater occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to decrease by 2% through 2024. However, there will be nearly 2,400 job openings per year through 2024 due to retirements and workers leaving the field. It is important to note that the *lighting technicians and media and communication equipment workers, all other* (27-4098) SOC code includes a variety of arts occupations and not solely *lighting technicians* or occupations related to technical theater. Therefore, the data in Exhibit 1 is likely overstated.

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

¹ Living wage data was pulled from California Family Needs Calculator on 5/3/2021. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

Exhibit 1: Middle-skill occupational demand in Los Angeles and Orange Counties²

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	21,323	20,909	(415)	(2%)	2,141
Orange	2,395	2,319	(76)	(3%)	237
Total	23,719	23,228	(491)	(2%)	2,378

Exhibit 2 shows the five-year occupational demand projections for the group of above middle-skill technical theater occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to decrease by 3% through 2024. However, there will be more than 2,900 job openings per year through 2024 due to retirements and workers leaving the field.

Exhibit 2: Above middle-skill occupational demand in Los Angeles and Orange Counties³

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	33,413	32,562	(851)	(3%)	2,765
Orange	2,116	2,057	(58)	(3%)	177
Total	35,528	34,619	(909)	(3%)	2,942

Wages

The labor market endorsement in this report considers the entry-level hourly wages for all of the technical theater occupations (both middle-skill and above middle-skill) in Orange County as they relate to the county’s living wage. Los Angeles County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Orange County— The majority (55%) of annual openings for all of the technical theater occupations in this report have entry-level wages below the living wage for one adult (\$17.36 in Orange County). Typical entry-level hourly wages are in a range between \$13.85 and \$26.55. Only two occupations in this report have entry-level wages that exceed the county’s living wage: *producers and directors* and *lighting technicians and media and communication equipment workers, all other* (\$26.55 and \$21.27, respectively). Experienced workers can expect to earn wages between \$33.12 and \$65.67, which are higher than the living wage estimate. Orange County’s average wages are below the average statewide wage of \$44.27 for these occupations.

Los Angeles County— All of the annual openings for these technical theater occupations have entry-level wages above the living wage for one adult (\$15.04 in Los Angeles County). Typical

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

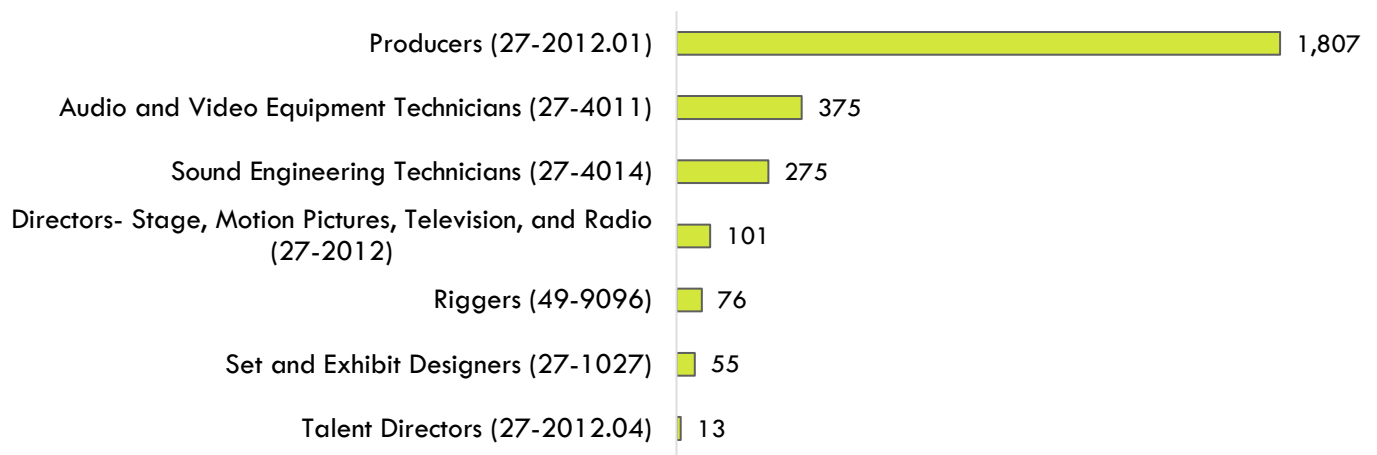
entry-level hourly wages are in a range between \$15.42 and \$31.33. Experienced workers can expect to earn wages between \$34.76 and \$74.68, which are higher than the living wage estimate. Los Angeles County’s average wages are above the average statewide wage of \$44.27 for these occupations.

Job Postings

There were 2,702 online job postings related to technical theater listed in the past 12 months. The majority of job postings (67%) were for *producers*, followed by *audio and video equipment technicians* (14%), and *sound engineering technicians* (10%). The remaining occupations and/or emerging occupations combined comprise only 9% of the technical theater job postings: *directors-stage, motion pictures, television, and radio* (27-2012.02), *riggers* (49-9096), *set and exhibit designers* (27-1027), and *talent directors* (27-2012.04). Above-middle skill technical theater occupations accounted for the majority of job postings (71%) as compared to middle-skill technical theater occupations (29%). The highest number of job postings were for producers, associate producers, executive producers, digital producers, and creative producers. The top skills were: budgeting, scheduling, project management, social media, and broadcast industry knowledge. The top three employers, by number of job postings, in the region were: Blizzard Entertainment, Charter Communications, and Amazon.

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.

Exhibit 3: Job postings by occupation (last 12 months)



Educational Attainment

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

- **Bachelor’s degree:** *set and exhibit designers; producers and directors*
- **Postsecondary non-degree award:** *audio and video technicians; sound engineering technicians*

- **High school diploma:** *lighting technicians and media and communication equipment workers, all other; riggers*

In the LA/OC region, the majority of annual job openings (59%) typically require a postsecondary non-degree award. Furthermore, the national-level educational attainment data indicates between 39% and 43.4% of workers in the field have completed some college or an associate degree. Of the 41% of technical theater job postings listing a minimum education requirement in Los Angeles/Orange County, 78% (860) requested a bachelor’s degree, 19% (208) requested a high school diploma and 3% (33) requested an associate degree.

Educational Supply

Community College Supply—Exhibit 3 shows the three-year average number of awards conferred by community colleges in the related TOP code: Technical Theater (1006.00). The colleges with the most completions in the region are: Santa Monica, LA City, and LA Pierce. Over the past 12 months, there were two other related program recommendation requests from regional community colleges.

Exhibit 3: Regional community college awards (certificates and degrees), 2017-2020

TOP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
1006.00	Technical Theater	Citrus	9	5	8	7
		East LA	10	7	15	11
		Glendale	-	-	1	0
		LA City	-	38	1	13
		LA Pierce	12	12	13	12
		LA Valley	2	4	2	3
		Long Beach	1	-	-	0
		Mt San Antonio	-	1	-	0
		Pasadena	2	4	2	3
		Santa Monica	16	17	17	17
		LA Subtotal	52	88	59	66
		Cypress	3	3	3	3
		Fullerton	10	11	4	8
		Golden West	-	-	1	0
		Irvine	2	3	3	3
		Orange Coast	-	1	-	0
		Saddleback	2	-	2	1
		Santa Ana	3	1	3	2
		OC Subtotal	20	19	16	18
		Supply Total/Average			72	107

Non-Community College Supply—For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for technical theater. Exhibit 4 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code: Technical Theatre/Theatre Design and Technology (50.0502). Due to different data collection periods, the most recent three-year period of available data is from 2016 to 2019. Between 2016 and 2019, four-year colleges in the region conferred an average of 45 awards annually in related training programs.

Exhibit 4: Regional non-community college awards, 2016-2019

CIP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
50.0502	Technical Theatre/ Theatre Design and Technology	California Institute of the Arts	31	26	38	32
		Pepperdine University	3	3	6	4
		Univ. of Southern California	6	8	12	9
		Vanguard Univ. of Southern CA	1	2	-	1
Supply Total/Average			41	39	56	45

Appendix A: Occupational demand and wage data by county

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)
Audio and Video Technicians (27-4011)	1,080	1,070	(10)	(1%)	113	\$16.58	\$23.10	\$35.81
Sound Engineering Technicians (27-4014)	329	325	(3)	(1%)	35	\$14.62	\$28.13	\$44.47
Lighting Technicians and Media and Communication Equipment Workers, All Other (27-4098)	695	639	(56)	(8%)	65	\$21.27	\$36.83	\$43.35
Riggers (49-9096)	291	284	(7)	(2%)	24	\$17.09	\$25.03	\$33.12
Middle-Skill Subtotal	2,395	2,319	(76)	(3%)	237			
Set and Exhibit Designers (27-1027)	635	609	(26)	(4%)	54	\$13.85	\$21.87	\$38.02
Producers and Directors (27-2012)	1,481	1,448	(32)	(2%)	123	\$26.55	\$41.56	\$65.67
Above Middle-Skill Subtotal	2,116	2,057	(58)	(3%)	177			
Total	4,511	4,376	(135)	(3%)	414			

Exhibit 6. 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)
Audio and Video Technicians (27-4011)	8,036	8,071	35	0%	849	\$18.42	\$25.67	\$39.80
Sound Engineering Technicians (27-4014)	3,945	3,920	(25)	(1%)	401	\$15.42	\$29.99	\$47.78
Lighting Technicians and Media and Communication Equipment Workers, All Other (27-4098)	8,057	7,670	(387)	(5%)	783	\$23.75	\$41.29	\$48.63
Riggers (49-9096)	1,285	1,248	(38)	(3%)	108	\$17.94	\$26.27	\$34.76
Middle-Skill Subtotal	21,323	20,909	(415)	(2%)	2,141			
Set and Exhibit Designers (27-1027)	3,858	3,786	(72)	(2%)	334	\$16.69	\$24.89	\$40.01
Producers and Directors (27-2012)	29,555	28,776	(779)	(3%)	2,431	\$31.33	\$47.99	\$74.68
Above Middle-Skill Subtotal	33,413	32,562	(851)	(3%)	2,765			
Total	54,736	53,470	(1,266)	(2%)	4,906			

Exhibit 7. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings
Audio and Video Technicians (27-4011)	9,116	9,141	25	0%	962
Sound Engineering Technicians (27-4014)	4,273	4,245	(28)	(1%)	436
Lighting Technicians and Media and Communication Equipment Workers, All Other (27-4098)	8,753	8,309	(443)	(5%)	848
Riggers (49-9096)	1,577	1,532	(45)	(3%)	132
Middle-Skill Subtotal	23,719	23,228	(491)	(2%)	2,378
Set and Exhibit Designers (27-1027)	4,493	4,395	(98)	(2%)	388
Producers and Directors (27-2012)	31,035	30,224	(811)	(3%)	2,554
Above Middle-Skill Subtotal	35,528	34,619	(909)	(3%)	2,942
Total	59,247	57,847	(1,400)	(2%)	5,320

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)

For more information, please contact:

Jesse Crete, Ed. D., Director
Center of Excellence, Orange County
crete_jesse@rscgd.edu

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