

**Program Endorsement Brief: 1006.00/Technical Theater
Live Entertainment Technician Certificate of Achievement**
Orange County Center of Excellence, October 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 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 related to one middle-skill occupation: *sound engineering technicians (27-4014)*. Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree.¹ 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 a supply gap for sound engineering technicians in the region. Furthermore, the Bureau of Labor Statistics (BLS) listed a postsecondary non-degree award as the typical entry-level education. However, entry-level wages are lower than 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 **467 jobs available annually** in the region due to new job growth and replacements, **which is more than the 100 awards conferred annually** by educational institutions in the region.
- **Living Wage Criteria** –Within Orange County, **typical entry-level hourly wages** for occupations are **\$14.81, which is lower than the California Family Needs Calculator** hourly wage (living wage) for one adult in the region (17.36 in Orange County).²

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 on 10/21/20. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

- **Educational Criteria** – The Bureau of Labor Statistics (BLS) lists a **postsecondary non-degree award as the typical entry-level education** for sound engineering technicians.
 - Furthermore, the national-level educational attainment data indicates **44.1% of workers in the field have completed some college or an associate degree.**

Supply:

- There are **16 community colleges** in the LA/OC region that issue awards related to technical theater, conferring an average of **89 awards annually** between 2016 and 2019.
- Between 2014 and 2017, there was an average of **11 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 sound engineering technicians. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 1% through 2024. There will be nearly 500 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.

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	3,828	3,862	34	1%	429
Orange	326	337	11	3%	38
Total	4,153	4,199	46	1%	467

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.

Wages

The labor market endorsement in this report considers the entry-level hourly wages for sound engineering technicians 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 typical entry-level hourly wages for sound engineering technicians are \$14.81, which is below the living wage for one adult (\$17.36 in Orange County).⁴ Experienced workers can expect to earn wages of \$45.03, which is higher than the living wage estimate. Orange County's average wages are below the average statewide wage of \$40.07 for this occupation.

Los Angeles County—The typical entry-level hourly wages for sound engineering technicians are \$15.45, which is above the living wage for one adult (\$15.04 in Los Angeles County).⁵ Experienced workers can expect to earn wages of \$48.08, which is higher than the living wage estimate. Los Angeles County's average wages are above the average statewide wage of \$40.07 for this occupation.

Job Postings

There were 365 online job postings related to sound engineering technicians listed in the past 12 months. The highest number of job postings were for sound designers, audio engineers, mixing technicians, audio DSP applications engineers and sound mixers. The top skills were: music, audio engineering, sound design, repair, and broadcast industry knowledge. The top three employers, by number of job postings, in the region were: B Braun Medical Incorporated, Live Nation Worldwide, and Blizzard Entertainment.

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 a postsecondary non-degree award as the typical entry-level education for sound engineering technicians. Furthermore, the national-level educational attainment data indicates 44.1% of workers in the field have completed some college or an associate degree. Of the 48% of sound engineering technician job postings listing a minimum education requirement in Los Angeles/Orange County, 64% (111) requested a bachelor's degree, 32% (55) requested a high school diploma and 5% (8) requested an associate degree.

Educational Supply

Community College Supply—Exhibit 2 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: LA City, Santa Monica, and Fullerton. Over

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the past 12 months, there were three other related program recommendation requests from regional community colleges.

Exhibit 2: 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		
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		
		Supply Total/Average			89	72	107	89

Non-Community College Supply—It is important to consider the supply from four-year institutions in the region that provide training programs for sound engineering technicians. Exhibit 3 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 2014 to 2017. Between 2014 and 2017, four-year colleges in the region conferred an average of 11 awards annually in related training programs.

Exhibit 3: Regional non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
50.0502	Technical Theatre/Theatre Design and Technology	Chapman University	-	1	-	0
		Pepperdine University	2	5	3	3
		University of Southern California	6	7	6	6
		Vanguard University of Southern California	2	-	1	1
Supply Total/Average			10	13	10	11

Appendix A: Occupational demand and wage data by county

Exhibit 4. 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)	326	337	11	3%	38	\$14.81	\$28.60	\$45.03

Exhibit 5. 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)	3,828	3,862	34	1%	429	\$15.45	\$30.39	\$48.08

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings
Sound Engineering Technicians (27-4014)	4,153	4,199	46	1%	467

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@rscdd.edu

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