

Labor Market Analysis for Program Modification:  
 1005.00/Commercial Music  
 (Digital Music Production Certificate)  
 Orange County Center of Excellence, December 2022



## Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met <input type="checkbox"/>	Endorsed: Some LMI Criteria Met <input checked="" type="checkbox"/>	Not LMI Endorsed <input type="checkbox"/>
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### Program LMI Endorsement Criteria

	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Supply Gap:	<i>Comments:</i> there is projected to be <b>1,339 annual job openings</b> throughout Los Angeles and Orange counties for these digital music production occupations, which is <b>more than the 453 awards conferred by educational institutions.</b>	
Living Wage: (Entry-Level, 25 <sup>th</sup> )	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> <b>the majority (67%) of annual job openings</b> for these digital music production occupations <b>have entry-level hourly wages below the OC living wage of \$20.63.</b>	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments:</i> The typical entry-level education for these digital music production occupations is a <b>postsecondary nondegree award and more than one-third of workers in the field have completed some college or an associate degree as their highest level of education.</b>	

### Emerging Occupation(s)

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i>Comments:</i> N/A	

The Orange County Center of Excellence for Labor Market Research (OC COE) prepared this report to determine whether there is a supply gap in the Los Angeles/Orange County regional labor market related to two middle-skill occupations:

- Audio and Video Technicians (27-4011)
- Sound Engineering Technicians (27-4014)

Based on the available data there appears to be a supply gap for these digital music production occupations and typical education requirements for these occupations align with a community college education. However, the majority of annual job openings have entry-level wages below the living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the occupations included in this report.

## Exhibit 1: Labor Market Endorsement Summary

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Audio and Video Technicians (27-4011)	836	Accounted for Below	OC: \$19.90	Postsecondary nondegree award	38%
Sound Engineering Technicians (27-4014)	503	453	OC: \$24.51	Postsecondary nondegree award	38%
<b>Total</b>	<b>1,339</b>	<b>453</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

### Demand:

- The number of jobs related to these digital music production occupations are projected to increase 10% through 2026, equating to 1,339 annual job openings.
- Hourly entry-level wages for these digital music production occupations range from \$19.90 to \$24.51 in Orange County; 67% of annual job openings have entry-level wages below the living wage.
- There were 1,779 online job postings for these digital music production occupations over the past 12 months. The highest number of postings were for audiovisual technicians, audio/video technicians, and audio engineers.
- The typical entry-level education for these digital music production occupations is a postsecondary nondegree award.
- Approximately 38% of workers in the field have completed some college or an associate degree as their highest level of educational attainment.

### Supply:

- There was an average of 277 awards conferred by 16 community colleges in Los Angeles and Orange Counties from 2018 to 2021.
- Non-community college institutions conferred an average of 176 awards from 2017 to 2020.
- Orange County community college students that exited digital music production programs in the 2018-2019 academic year had a median annual wage of \$20,112 after exiting the program and 12% attained the regional living wage.
- There is insufficient data to determine the percentage of students that reported that they are working in a job closely related to their field of study.

## Demand

### Occupational Projections:

Exhibit 2 shows the annual percent change in jobs for these digital music production occupations from 2016 through 2026. There was a 17% decline in employment for these digital music production occupations from 2019 to 2020, which is significantly higher than the 7% decline across all occupations from 2019 to 2020 due to the COVID-19 pandemic. These digital music production occupations are projected to grow at a similar rate to all occupations through 2026.

## Exhibit 2: Annual Percent Change in Jobs for Digital Music Production Occupations, 2016-2026

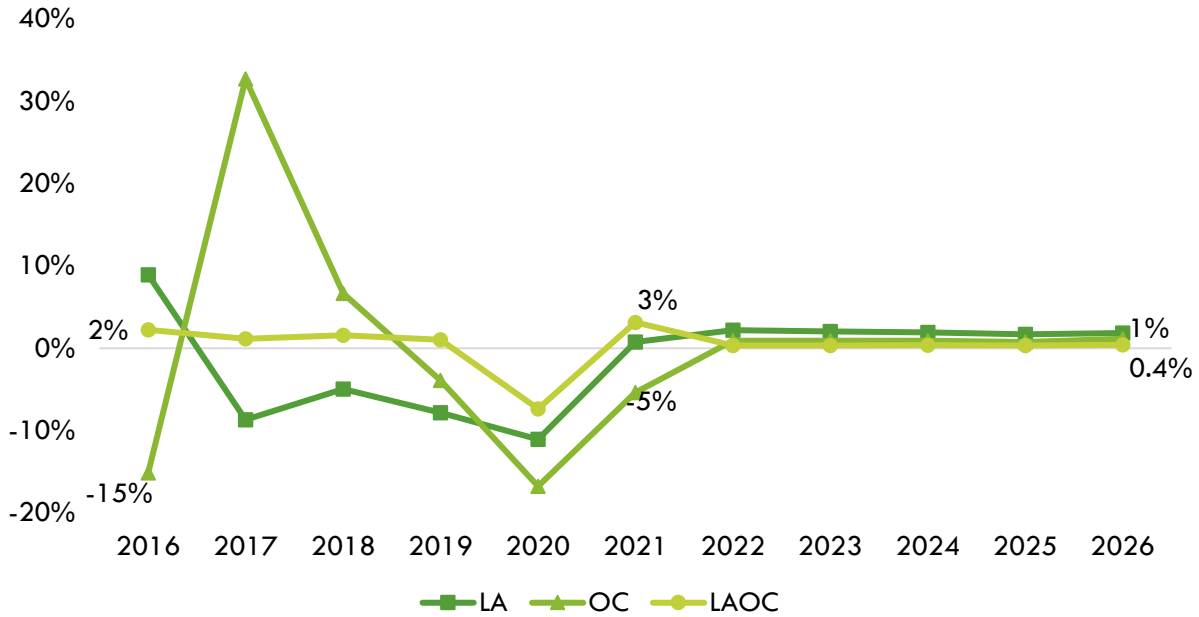


Exhibit 3 shows the five-year occupational demand projections for these digital music production occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 10% through 2026. There is projected to be 1,339 jobs available annually. Of those, 92% (1,230) are in Los Angeles County.

### Exhibit 3: Occupational Demand in Los Angeles and Orange Counties<sup>1</sup>

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	9,958	10,969	1,011	10%	1,230
Orange	990	1,038	47	5%	110
<b>Total</b>	<b>10,948</b>	<b>12,007</b>	<b>1,059</b>	<b>10%</b>	<b>1,339</b>

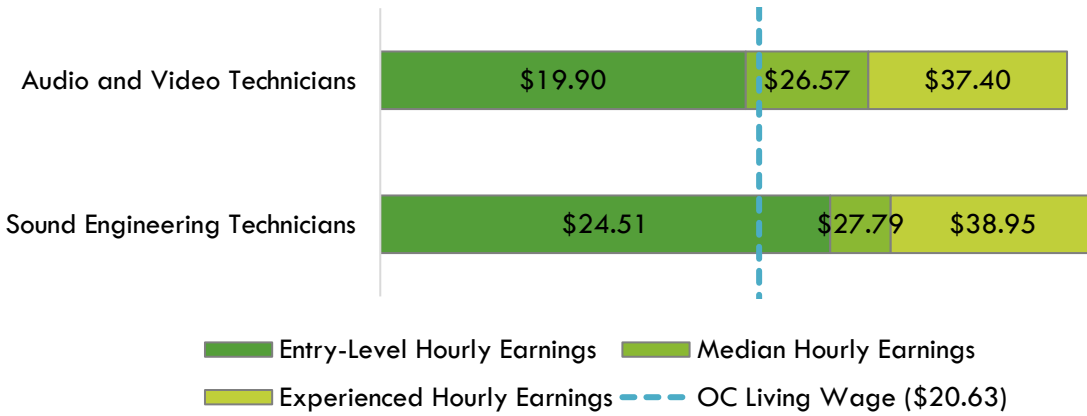
## Wages:

The labor market endorsement in this report considers the entry-level hourly wages for these digital music production occupations 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.

The majority (67%) of annual openings for these digital music production occupations have entry-level wages below the living wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages range between \$19.90 and \$24.51. Orange County's average wages are below the average statewide wage of \$34.31 for these occupations. Exhibit 4 shows the wage range for each of these digital music production occupations in Orange County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

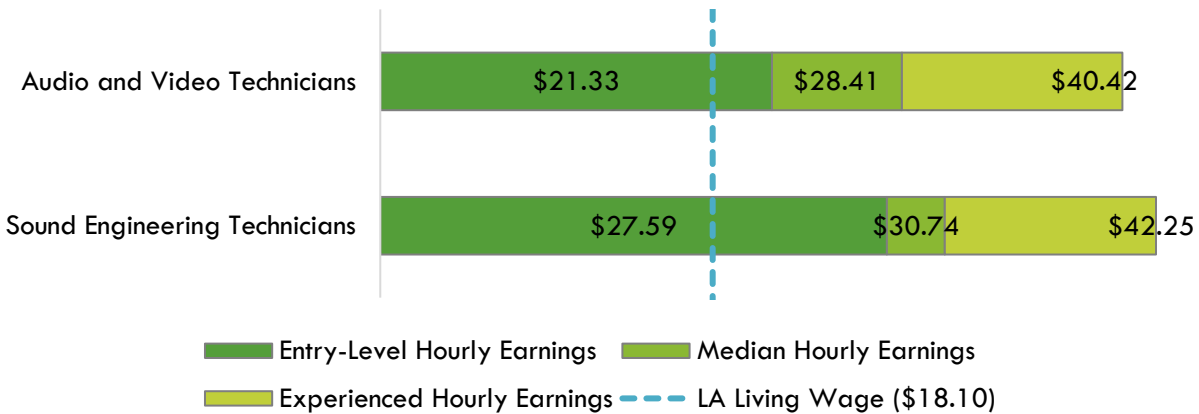
<sup>1</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

### Exhibit 4: Wages by Occupation in Orange County



All annual openings for these digital music production occupations have entry-level wages above the living wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages are in a range between \$21.33 and \$27.59. Los Angeles County’s average wages are above the average statewide wage of \$34.31 for these occupations. Exhibit 5 shows the wage range for each of these digital music production occupations in Los Angeles County how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

### Exhibit 5: Wages by Occupation in Los Angeles County



### Job Postings:

There were 1,779 online job postings related to these digital music production occupations listed in the past 12 months. Exhibit 6 shows the number of job postings by occupation. The majority of job postings were for *audio and video technicians*.

### Exhibit 6: Number of Job Postings by Occupation (n=1,779)

Occupation	Job Postings	Percentage of Job Postings
Audio and Video Technicians	1,205	68%
Sound Engineering Technicians	574	32%
<b>Total Postings</b>	<b>1,779</b>	<b>100%</b>

The top employers in the region, by number of job postings, are shown in Exhibit 7.

### Exhibit 7: Top Employers by Number of Job Postings (n=1,779)

Employer	Job Postings	Percentage of Job Postings
Encore Global	128	7%
Disney	54	3%
Encore	51	3%
B. Braun	32	2%
Live Nation	27	2%
California State University	21	1%
Disneyland Resort	20	1%
Production Resource Group	18	1%
Randstad	17	1%
Audio Visual Management	15	1%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 8.

### Exhibit 8: Top Skills by Number of Job Postings (n=1,779)

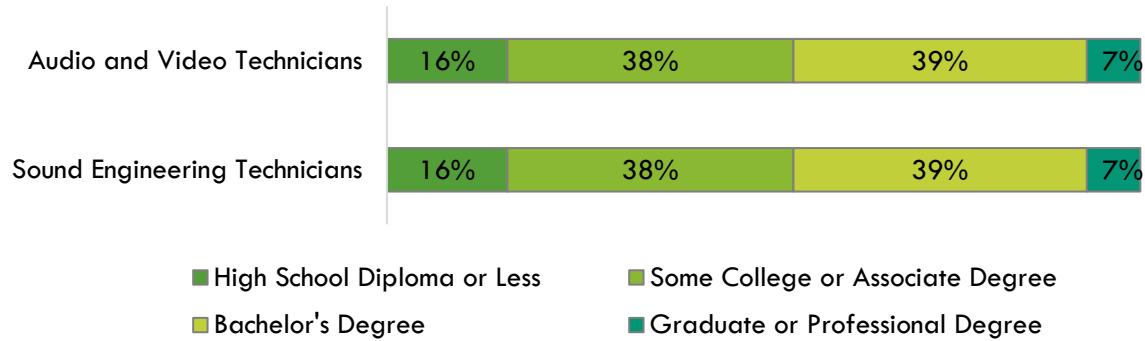
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Audiovisual Equipment (215)	Communications (729)	Microsoft Office (106)
Operations Management (185)	Troubleshooting (Problem Solving) (632)	Zoom (Video Conferencing Tool) (106)
Electronic Components (178)	Customer Service (541)	Microsoft Excel (104)
Invoicing (173)	Operations (511)	Pro Tools (80)
Workflow Management (161)	Valid Driver's License (431)	Microsoft PowerPoint (78)
Crestron (A/V Systems) (152)	Management (345)	Microsoft Outlook (67)
Upselling (146)	Professionalism (284)	Adobe Premiere Pro (46)
Equipment Operation (144)	Problem Solving (271)	Operating Systems (43)
Audio Engineering (136)	Lifting Ability (268)	Adobe Photoshop (40)
Control Systems (135)	Detail Oriented (231)	Mac OS (40)

### Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a postsecondary nondegree award as the typical entry-level education for these digital music production occupations. Additionally, the national-level educational attainment data indicates 38% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 9 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Of the 48% of the cumulative job postings for these digital music production occupations that listed a minimum education requirement in Los Angeles/Orange County, 71% (601) requested a high school diploma or an associate degree and 29% (246) requested a bachelor's degree.

## Exhibit 9: National-level Educational Attainment for Occupations



## Educational Supply Community College Supply:

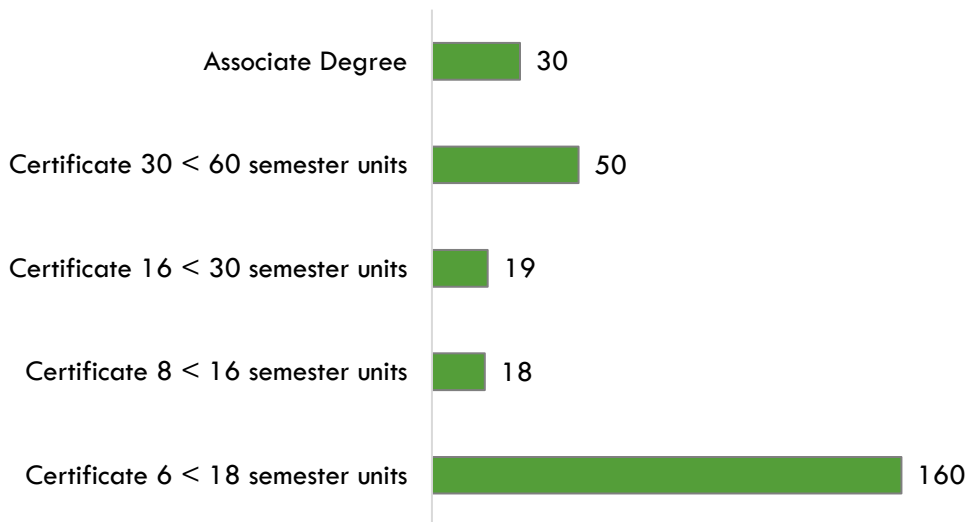
Exhibit 10 shows the three-year average number of awards conferred by community colleges in the related TOP code: Commercial Music (1005.00). The colleges with the most completions in the region are LA City, Citrus, and Saddleback. Over the past 12 months, there was one other related program recommendation requests from regional community colleges.

### Exhibit 10: Regional Community College Awards (Certificates and Degrees), 2018-2021

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average		
1005.00	Commercial Music	Cerritos	3	5	8	5		
		Citrus	58	51	51	53		
		Compton	0	0	1	0		
		East LA	0	0	2	0		
		Glendale	0	0	2	1		
		LA City	313	129	12	152		
		LA Harbor	6	4	0	3		
		LA Valley	7	10	6	7		
		Long Beach	0	0	1	0		
		Pasadena	0	0	2	0		
		<b>LA Subtotal</b>	<b>387</b>	<b>199</b>	<b>85</b>	<b>221</b>		
		Cypress	9	17	10	12		
		Fullerton	5	10	8	7		
		Irvine	1	1	0	1		
		Orange Coast	7	8	1	5		
		Saddleback	7	9	61	25		
		Santa Ana	7	4	7	6		
		<b>OC Subtotal</b>	<b>36</b>	<b>49</b>	<b>87</b>	<b>56</b>		
		<b>Supply Total/Average</b>			<b>423</b>	<b>248</b>	<b>172</b>	<b>277</b>

Exhibit 11 shows the annual average community college awards by type from 2018-19 through 2020-21. The majority of the awards are for certificates between 6 and less than 18 semester units, followed by certificates between 30 and less than 60 semester units and associate degrees.

### Exhibit 11: Annual Average Community College Awards by Type, 2018-2021



### Community College Student Outcomes:

Exhibit 12 shows the Strong Workforce Program (SWP) metrics for commercial music programs in Rancho Santiago Community College District (RSCCD), the Orange County Region, and California. Of the 1,241 commercial music students in the 2019-20 academic year, 8% (100) attended an RSCCD college.

RSCCD students that exited commercial music programs in the 2018-19 academic year had lower median annual earnings (\$16,628) compared to all commercial music students in Orange County (\$20,112).

### Exhibit 12: Commercial Music (1005.00) Strong Workforce Program Metrics, 2019-20<sup>2</sup>

SWP Metric	RSCCD	OC Region	California
SWP Students	100	1,241	9,025
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	16%	14%	18%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Insufficient Data	Insufficient Data	74%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	Insufficient Data	35	274
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2018-19)	10	77	449
SWP Students with a Job Closely Related to Their Field of Study (2017-18)	Insufficient Data	Insufficient Data	0%
Median Annual Earnings for SWP Exiting Students (2018-19)	\$16,628 (\$7.99)	\$20,112 (\$9.67)	\$22,620 (\$10.88)

<sup>2</sup> All SWP metrics are for 2019-20 unless otherwise noted.

SWP Metric	RSCCD	OC Region	California
Median Change in Earnings for SWP Exiting Students (2018-19)	41%	39%	38%
SWP Exiting Students Who Attained the Living Wage (2018-19)	Insufficient Data	12%	25%

## 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 these digital music production occupations. Exhibit 13 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code: Recording Arts Technology/Technician (10.0203). Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, non-community colleges in the region conferred an average of 176 awards annually in related training programs.

**Exhibit 13: Regional Non-Community College Awards, 2017-2020**

CIP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
10.0203	Recording Arts Technology/Technician	Los Angeles Film School	139	54	0	64
		Loyola Marymount University	10	12	13	12
		Musicians Institute	113	115	73	100
<b>Supply Total/Average</b>			<b>262</b>	<b>181</b>	<b>86</b>	<b>176</b>



## Regional Demographics

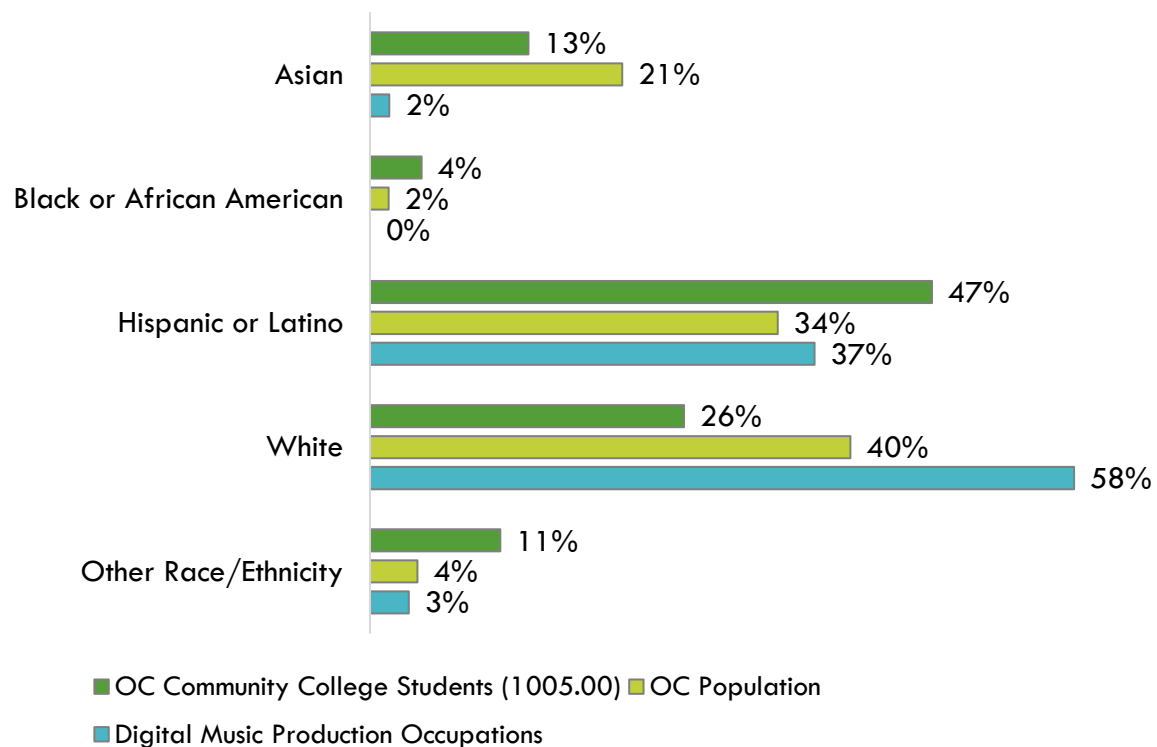
This section analyzes demographic data for Orange County community college students enrolled in digital music production programs compared to the OC population, as well occupational data, for the purpose of identifying potential diversity and equity issues that can be addressed by community college programs.

### Ethnicity:

Exhibit 14 shows the ethnicity of Orange County community college students enrolled in commercial music programs compared to the overall Orange County population, as well as the two digital music production occupations included in this report. Notably, 58% of workers employed in these digital music production occupations are White, which is much higher than the population (40%) and community college commercial music students (26%).

Conversely, 47% of community college commercial music students are Hispanic or Latino, which is significantly higher than both the population (34%) and these digital music production occupations (37%). Furthermore, only 2% of workers in these digital music occupations are Asian, which is significantly lower than community college commercial music students (13%) and the population (21%).

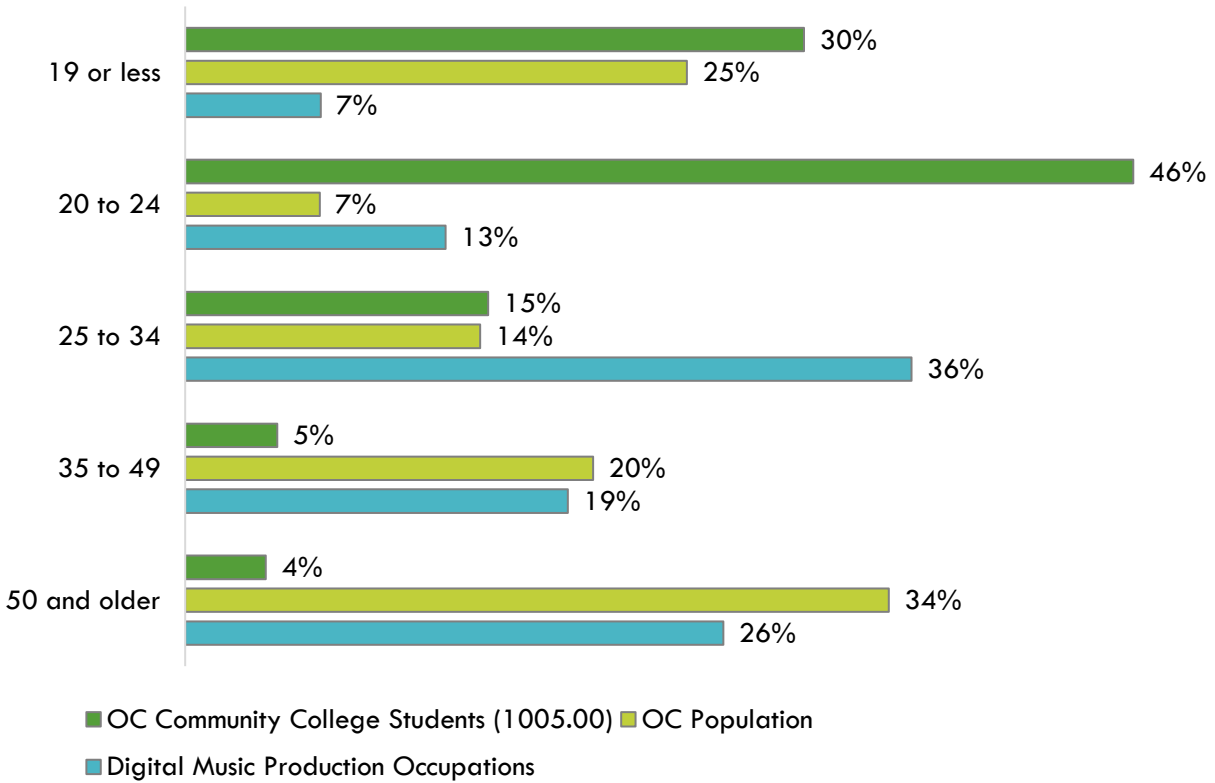
Exhibit 14: Program and County Demographics by Ethnicity



## Age:

Exhibit 14 shows the age of Orange County community college students enrolled in commercial music programs compared to the overall Orange County population, as well as the two digital music production occupations included in this report. Over 75% of community college commercial music students are 24 or less, which is significantly higher than the population (32%) and these digital music production occupations (20%). The plurality of workers in these digital music production occupations are 25 to 34 (36%), which is significantly higher than community college commercial music students (15%) and the population (14%).

Exhibit 14: Program and County Demographics by Age

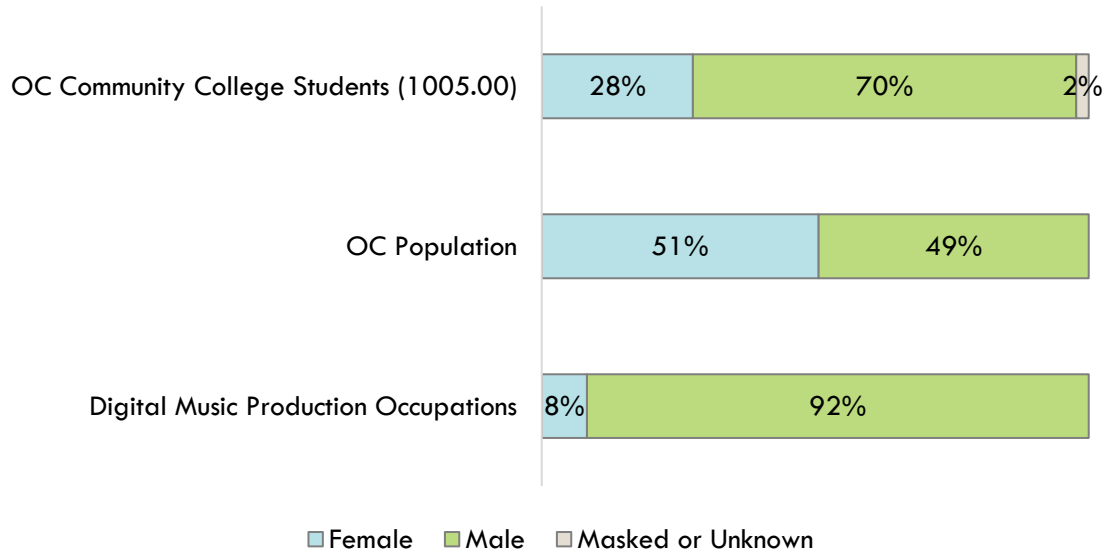


## Sex:

Exhibit 15 shows the sex of Orange County community college students enrolled in commercial music programs compared to the overall Orange County population as well as these digital music production occupations.

Though the population is split nearly evenly, the vast majority of community college commercial music students (70%) and workers in these digital music production occupations (92%) are men.

**Exhibit 15: Program and County Demographics by Sex**



## Appendix A: Methodology A

The OC COE prepared this report by analyzing data from occupations and education programs. Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies. Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Using a TOP-SOC crosswalk, the OC COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- 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.

The OC COE determined labor market supply for an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a “supply table” with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart ([datamart.cccco.edu](http://datamart.cccco.edu)) and CIP code data comes from the Integrated Postsecondary Education Data System ([nces.ed.gov/ipeds/use-the-data](http://nces.ed.gov/ipeds/use-the-data)), also known as IPEDS. TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Data included in this analysis represent the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the OC COE. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study which can signal demand and show what employers are looking for in potential employees, but is not a perfect measure of the quantity of open positions.

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

## Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	<p>Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics and the American Community Survey. For more information, see <a href="https://lightcast.io/">https://lightcast.io/</a></p>
Living Wage	<p>The living wage is derived from the Insight Center’s California Family Needs Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, child care, health care, transportation, and taxes. For more information, see: <a href="https://insightccd.org/family-needs-calculator/">https://insightccd.org/family-needs-calculator/</a></p> <p>The living wage for one adult in Orange County is \$20.63 per hour (\$42,910.40 annually). This figure is used by the CCCCCO to calculate the percentage of students that attained the regional living wage.</p>
Typical Education and Training Requirements, and Educational Attainment	<p>The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see <a href="https://www.bls.gov/emp/documentation/education/tech.htm">https://www.bls.gov/emp/documentation/education/tech.htm</a></p>
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	<p>The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations. For more information, see <a href="https://www.onetonline.org/help/online/">https://www.onetonline.org/help/online/</a></p>
Educational Supply	<p>The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: <a href="https://datamart.cccco.edu">https://datamart.cccco.edu</a></p> <p>The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see <a href="https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions">https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</a></p>
Student Metrics and Demographics	<p>LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: <a href="https://www.calpassplus.org/LaunchBoard/Home.aspx">https://www.calpassplus.org/LaunchBoard/Home.aspx</a></p>

Data Type	Source
Population and Occupation Demographics	<p>The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. For more information, see: <a href="https://www.census.gov/programs-surveys/acs">https://www.census.gov/programs-surveys/acs</a></p> <p>Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: <a href="https://usa.ipums.org/usa/about.shtml">https://usa.ipums.org/usa/about.shtml</a></p>

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