



Labor Market Analysis: 1009.00 – Applied Design

Applied Design – Certificate requiring 16 to fewer than 30 semester units

Los Angeles Center of Excellence, January 2025

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"/>	

SUMMARY

This report analyzes whether local labor market demand is being met by community college programs aligned with the identified middle-skill occupations¹ or whether a shortage of workers exists. Labor market demand is measured by annual job openings while education supply is measured by the number of awards (degrees and certificates) conferred on average each year.

Based on the available data, there appears to be a supply gap for the two identified target occupations in the region. While the majority of annual openings have entry-level wages that are lower than the self-sufficiency standard wage in both Los Angeles and Orange counties, nearly one-third of current workers in the field have completed an associate degree or less educational attainment.

Recommendation: Due to two of three program endorsement criteria being met, the Los Angeles Center of Excellence for Labor Market Research (LA COE) endorses this proposed program.

Key Findings

Supply Gap

- 1,667 annual job openings are projected in the region through 2028. This number is greater than the three-year average of 959 awards conferred by educational institutions in the region.

¹ Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree. 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.

Living Wage

- 91% of annual job openings for these applied design occupations have entry-level wages **below** Los Angeles County's self-sufficiency standard hourly wage (\$24.03/hour).²

Educational Attainment

- A bachelor's degree is the typical entry-level education for these applied design occupations according to the Bureau of Labor Statistics (BLS).
- 28%-32% of workers in the field have completed an associate degree or less educational attainment, according to national educational attainment data.

Community college supply

- 23 community colleges issued awards related to applied design in the greater LA/OC region.
- 387 awards (degrees and certificates) were conferred on average each year between 2021 and 2023.

Other postsecondary supply

- 21 educational institutions in the LA/OC region have conferred awards in programs related to applied design over the past three years.
- 572 awards were conferred on average each year by other postsecondary institutions throughout the greater LA/OC region between 2020 and 2022.

TARGET OCCUPATIONS

LA COE prepared this report to provide regional labor market and postsecondary supply data related to two target occupations. Although the occupations in this report typically require a bachelor's degree, they are considered middle-skill because approximately one-third of workers in the field have completed some college or an associate degree. [For full occupation descriptions, please see Appendix.](#)

- **Commercial and Industrial Designers (27-1021)**³
- **Graphic Designers (27-1024)**⁴

OCCUPATIONAL DEMAND

Exhibit 1 shows the five-year occupational demand projections for these two occupations. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to decrease by 2% through 2028. However, there will be nearly 1,700 job openings per year through 2028 due to retirements and workers leaving the field. The majority of jobs in 2023 for the target occupations (76%) were located in Los Angeles County.

² Center for Women's Welfare, University of Washington. (2024). *The self-sufficiency standard for California 2024*. <http://selfsufficiencystandard.org/California>.

³ [Industrial Designers \(bls.gov\)](https://www.bls.gov/occupations/27-1021)

⁴ [Graphic Designers \(bls.gov\)](https://www.bls.gov/occupations/27-1024)

Exhibit 1: Current employment and occupational demand, Los Angeles and Orange counties⁵

Geography	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
Los Angeles	16,218	15,940	(277)	(2%)	1,266
Orange	5,213	5,046	(167)	(3%)	401
Total	21,431	20,986	(445)	(2%)	1,667

Detailed Occupation Data

Exhibit 2 displays the current employment and projected occupational demand for each of the target occupations in Los Angeles County. Positive scores for automation resilience⁶ reflect a lower-than-average threat of the occupation(s) being replaced by automation, while negative scores reflect a greater-than-average risk of automation. The average percentage of workers aged 55+ across all occupations in the Los Angeles/Orange County region is 26%; occupations with a larger share of workers aged 55 and older typically have greater replacement needs to offset the amount of impending retirements. On average, 81% of workers across all occupations in California are employed full-time. Occupations with a lower-than-average percentage of full-time workers may have less employment security but may see increased activity in the gig economy.

Exhibit 2: Detailed employment and occupational demand, Los Angeles County⁷

Occupation	2023 Jobs	2028 Jobs	5-Yr % Change	Annual Openings	Auto-mation Resilience	% Aged 55 and older	% Full Time Workers
Commercial and Industrial Designers	1,759	1,686	(4%)	116	18.7	24%	100%
Graphic Designers	14,459	14,254	(1%)	1,150	19.2	21%	73%
Total	16,218	15,940	(2%)	1,266	-	-	-

WAGES

The labor market endorsement in this report considers the entry-level hourly wages for these target occupations in Los Angeles County as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater Los Angeles/Orange County region.

⁵ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁶ Automation risk is calculated based on the percentage of time spent on high-risk compared to low-risk work, the number of high-risk jobs in compatible occupations, and the overall industry automation risk.

⁷ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Los Angeles County

The majority, 91%, of annual openings for these applied design occupations have entry-level wages below the self-sufficiency standard wage for one adult (\$24.03 in Los Angeles County). Typical entry-level hourly wages are in a range between \$22.63 and \$30.26. (Exhibit 3).

One occupation has entry-level wages above the self-sufficiency standard wage:

- *Commercial and industrial designers*, \$30.26

Experienced workers can expect to earn wages between \$45.77 and \$49.88, which are higher than the self-sufficiency standard.

Exhibit 3: Earnings for occupations in Los Angeles County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Commercial and Industrial Designers	\$30.26	\$38.18	\$49.88	\$79,400
Graphic Designers	\$22.63	\$33.79	\$45.77	\$70,300

*Rounded to the nearest \$100

Orange County

The majority, 87%, of annual openings for these applied design occupations have entry-level wages below the self-sufficiency standard wage for one adult (\$27.13 in Orange County). Typical entry-level hourly wages are in a range between \$22.05 and \$30.97 (Exhibit 4).

One occupation has entry-level wages above the self-sufficiency standard wage:

- *Commercial and industrial designers*, \$30.97

Experienced workers can expect to earn wages between \$43.99 and \$50.18, which are higher than the self-sufficiency standard.

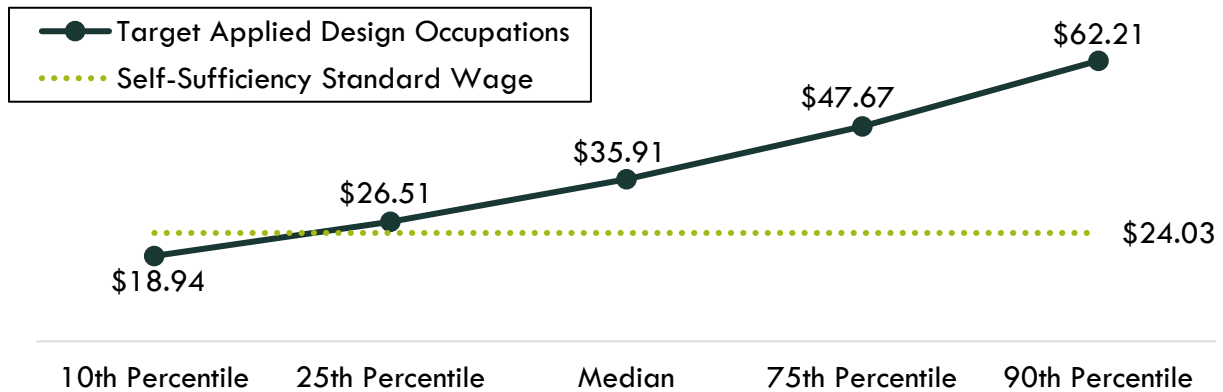
Exhibit 4: Earnings for occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Commercial and Industrial Designers	\$30.97	\$38.57	\$50.18	\$80,200
Graphic Designers	\$22.05	\$32.69	\$43.99	\$68,000

*Rounded to the nearest \$100

Across the greater Los Angeles and Orange County region, the average entry-level hourly earnings for the occupations in this report are \$26.51; this is above the living wage for one single adult in Los Angeles County (\$24.03). Exhibit 5 shows the average hourly wage for the occupations in this report, for entry-level to experienced workers.

Exhibit 5: Average hourly earnings for target applied design occupations, Los Angeles and Orange counties



JOB POSTINGS

There were 3,944 online job postings related to applied design occupations listed in the past 12 months in Los Angeles and Orange counties. Exhibit 6 displays the number of job postings by occupation. The majority of job postings (66%) were for *graphic designers*, followed by *commercial and industrial designers* (34%).

Exhibit 6: Job postings by occupation (last 12 months), Los Angeles and Orange counties



Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupations in this report (Exhibit 7).

Exhibit 7: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> Graphic designers Product designers Packaging designers Apparel graphic designers Industrial designers Graphic artists Design consultants Motion graphics designers 	<ul style="list-style-type: none"> Adobe Illustrator Adobe Photoshop Graphic design Marketing Adobe InDesign Typography New product development Product design 	<ul style="list-style-type: none"> Nordstrom Disney 24 Seven* Mattel Amazon NBC Robert Half* Aquent* Apple

*Staffing companies

In the greater Los Angeles/Orange County region, 49% of the applied design job postings listed a minimum educational requirement. Exhibit 8 details the number and percentage of job postings by educational level.

Exhibit 8: Education levels requested in job postings for target occupations, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor's degree	1,667	86%
Associate degree	147	8%
High school diploma or vocational training	118	6%

EDUCATIONAL ATTAINMENT

The Bureau of Labor Statistics (BLS) lists a bachelor’s degree as the typical entry-level education for the target occupations in this report (Exhibit 9). The national-level data indicates between 28% and 32% of workers in the field have completed an associate degree as their highest level of educational attainment. However, between 68% and 72% of current workers in the field have completed a bachelor’s degree or more educational attainment. The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for the occupations in this report:

Exhibit 9: Entry-level education preferred by employers nationally, Bureau of Labor Statistics

Occupation	Education Level
Graphic designers	Bachelor’s degree
Commercial and industrial designers	Bachelor’s degree

EDUCATIONAL SUPPLY

Community College Supply

Exhibit 10 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for the occupations of interest. The colleges with the most completions in the region are Santa Monica, Rio Hondo, and Orange Coast.

Exhibit 10: Regional community college awards (certificates and degrees), 2021-2023

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
0614.60	Computer Graphics and Digital Imagery	Citrus	26	7	11	15
		East LA	2	2	4	3
		Mt San Antonio	1	-	-	0
		LA Subtotal	29	9	15	18
		Cypress	-	-	1	0

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
		Fullerton	3	-	-	1
		Irvine	-	4	1	2
		Orange Coast	31	28	18	26
		Saddleback	2	3	7	4
		Santa Ana	3	2	4	3
		OC Subtotal	39	37	31	36
		Supply Subtotal/Average	68	46	46	53
1009.00	Applied Design	Orange Coast	1	-	-	0
		OC Subtotal	1	-	-	0
		Supply Subtotal/Average	1	-	-	0
1013.00	Commercial Art	El Camino	-	1	-	0
		LA Trade-Tech	22	33	21	25
		LA Valley	14	8	7	10
		Pasadena	2	6	-	3
		LA Subtotal	38	48	28	38
		Fullerton	5	5	-	3
		Orange Coast	1	9	8	6
		Santa Ana	3	1	1	2
		OC Subtotal	9	15	9	11
		Supply Subtotal/Average	47	63	37	49
1030.00	Graphic Art and Design	Cerritos	14	13	18	15
		East LA	8	6	9	8
		El Camino	-	-	1	0
		Glendale	9	10	8	9
		LA City	8	19	14	14
		LA Harbor	-	-	1	0
		LA Pierce	13	22	12	16
		LA Valley	1	5	1	2
		Long Beach	8	7	5	7
		Mt San Antonio	20	21	25	22
		Pasadena	15	12	11	13
		Rio Hondo	28	23	54	35
		Santa Monica	43	51	68	54
		LA Subtotal	167	189	227	194
		Cypress	4	6	18	9

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
		Fullerton	14	15	18	16
		Golden West	20	16	13	16
		Irvine	21	27	17	22
		Saddleback	19	22	22	21
		Santa Ana	3	-	-	1
		Santiago Canyon	4	5	5	5
		OC Subtotal	85	91	93	90
		Supply Subtotal/Average	252	280	320	284
		Supply Total/Average	368	389	403	387

Other Postsecondary Supply

For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for applied design occupations. Exhibit 11 shows the number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent data is from 2020 to 2022. Between 2020 and 2022, other postsecondary college institutions in the region conferred an average of 572 bachelor's and sub-baccalaureate awards. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards that typically take fewer than four years to complete. Of the awards in Exhibit 11, 73% were bachelor's degrees (419 awards) and 27% were sub-baccalaureate awards (153 awards).

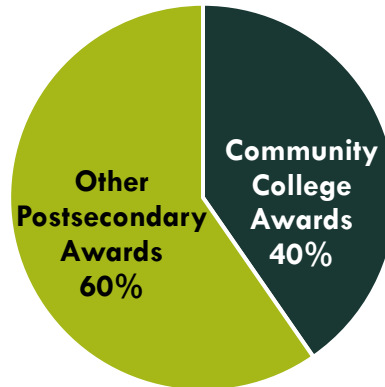
Exhibit 11: Other regional postsecondary awards, 2020-2022

CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
10.0301	Graphic Communications, General	CSU-LA	9	10	9	9
11.0803	Computer Graphics	ABC Adult School	4	3	6	4
		LA Pacific College	12	5	6	8
11.0899	Computer Software and Media Applications, Other	Art Center College of Design	20	14	21	18
		CA Institute of the Arts	7	1	6	5
		Learnet Academy	10	9	2	7
50.0401	Design and Visual Communications, General	Azusa Pacific Univ.	-	-	12	4
		Biola University	3	9	9	7
		Columbia College Hollywood	-	7	1	3

CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
		Fashion Institute of Design & Merch.	90	69	57	72
		Gnomon	19	42	31	31
		LA Pacific College	13	1	1	5
		Otis College of Art and Design	36	30	39	35
		UCLA	-	-	1	0
		USC	5	22	29	19
50.0402	Commercial and Advertising Art	Art Center College of Design	16	7	9	11
		Mount St. Mary's Univ.	1	-	-	0
		Woodbury University	10	13	10	11
50.0409	Graphic Design	Art Center College of Design	67	75	70	71
		CA Institute of the Arts	12	12	15	13
		CSPU-Pomona	89	113	105	102
		Chapman University	27	24	29	27
		Columbia College Hollywood	-	9	4	4
		Concordia Univ.-Irvine	10	7	9	9
		Fashion Institute of Design & Merch.	38	25	12	25
		Laguna College of Art and Design	25	26	24	25
		LA Film School	28	47	52	42
		LA Pacific College	8	2	7	6
Supply Total/Average			559	582	576	572

Exhibit 12 shows the proportion of community college awards conferred in the greater Los Angeles/Orange County region compared to the number of other postsecondary awards for the programs in this report. The majority of awards conferred in these programs are awarded by other institutions in the greater Los Angeles/Orange County region.

Exhibit 12: Percentage of community college awards compared to other postsecondary institution awards in the Los Angeles/Orange County region



APPENDIX: OCCUPATION DESCRIPTIONS

LA COE prepared this report to provide regional labor market supply and demand data related to these target occupations:

- **Commercial and Industrial Designers (27-1021)** Design and develop manufactured products, such as cars, home appliances, and children’s toys. Combine artistic talent with research on product use, marketing, and materials to create the most functional and appealing product design.⁸
- **Graphic Designers (27-1024)** Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.⁹

⁸ [Industrial Designers \(bls.gov\)](https://www.bls.gov)

⁹ [Graphic Designers \(bls.gov\)](https://www.bls.gov)

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DATA SOURCES

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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