

**Program Endorsement Brief: 1009.00/Applied Design**  
Los Angeles/Orange County Center of Excellence, May 2020

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### 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 (commercial and industrial designers (27-1021)) and two below middle-skill occupations (craft artists (27-1012) and cabinetmakers and bench carpenters (51-7011)). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.<sup>1</sup> 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 seems to be a supply gap for design-related workers in the region. However, two of the three occupations are below middle-skill and have wages below the living wage for both counties. Therefore, the **COE cautiously endorses this program**. Reasons include:

#### Demand:

- Over the next five years, there is projected to be **973 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 26% and 29%** of workers in the field have completed some college or an associate degree.
- Typical entry-level hourly wages for design-related occupations throughout the region are between \$12.36 and \$24.18. Wages for commercial and industrial designers are above the California Family Needs Calculator hourly wage for one adult in Los Angeles County (\$15.04) and Orange County (\$17.36).<sup>2</sup>

#### Supply:

- Between 2016 and 2019, community colleges in the region conferred **an average of 121 awards annually** in related programs.
- There were no completions in applied design programs during the last three years.

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<sup>1</sup> 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.

<sup>2</sup> 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/>.

## Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for the three design-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 nearly 1,000 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 Counties<sup>3</sup>**

| Geography    | 2019 Jobs    | 2024 Jobs    | 2019-2024 Change | 2019-2024 % Change | Annual Openings |
|--------------|--------------|--------------|------------------|--------------------|-----------------|
| Los Angeles  | 6,688        | 6,308        | (380)            | (6%)               | 707             |
| Orange       | 2,379        | 2,445        | 66               | 3%                 | 266             |
| <b>Total</b> | <b>9,067</b> | <b>8,753</b> | <b>(314)</b>     | <b>(3%)</b>        | <b>973</b>      |

**Wages** — Typical entry-level hourly wages for design-related occupations throughout the region are between \$12.36 and \$24.18.<sup>4</sup> Wages for commercial and industrial designers are above the California Family Needs Calculator hourly wage for one adult in Los Angeles County (\$15.04) and Orange County (\$17.36).<sup>5</sup> Median wages for the two occupations of interest are between \$16.28 and \$31.60 per hour. Wage information, by county, is included in Appendix A.

**Job Postings** — There were 1,754 online job postings for the three design-related occupations listed in the past 12 months. The highest number of job postings were for product designer, cabinet maker/installer, User Interface/User Experience Designer, and industrial designer. The top skills were: product design, prototyping, and visual design. The top employers, by number of job postings, in the region were: Mattel Inc., Boeing, and Next Trucking. Of the 1,754 online job postings, 53% list a minimum education requirement.

**Educational Attainment** — The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for commercial and industrial designers; high school diploma or equivalent for cabinet and bench carpenters; and no formal educational credential for craft artists. National-level educational attainment data indicates that between 26% and 29% of workers in the field have completed some college or an associate degree. Of the 53% of job postings listing a minimum education requirement in Los Angeles/Orange County, 14% (127) requested high school or vocational training, 3% (26) requested an associate degree, and 83% (771) requested a bachelor's degree.

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<sup>3</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.

<sup>4</sup> 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.

<sup>5</sup> 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/>.

## 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 the three occupations of interest. The colleges with the most completions in the region are: LA Trade-Tech, and Cerritos. During the last twelve months, there was one other related program recommendation request from a regional community college.

There were no completions in Applied Design programs during the last three years.

### 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 |
|-----------------------------|-----------------------|-----------------|------------------|------------------|------------------|----------------------|
| 0952.10                     | Carpentry             | Fullerton       | 1                | -                | 3                | 1                    |
|                             |                       | LA Trade-Tech   | 29               | 38               | 21               | 29                   |
|                             |                       | Santiago Canyon | 1                | -                | 1                | 1                    |
| 0952.50                     | Mill and Cabinet Work | Cerritos        | 9                | 32               | 17               | 19                   |
|                             |                       | El Camino       | 3                | -                | -                | 1                    |
| 1013.00                     | Commercial Art        | Cypress         | 1                | 2                | 2                | 2                    |
|                             |                       | Fullerton       | 2                | 6                | 7                | 5                    |
|                             |                       | LA Mission      | 1                | -                | -                | 0                    |
|                             |                       | LA Trade-Tech   | 41               | 42               | 44               | 42                   |
|                             |                       | LA Valley       | 3                | 8                | 4                | 5                    |
|                             |                       | Long Beach      | 1                | -                | -                | 0                    |
|                             |                       | Orange Coast    | 5                | 3                | 6                | 5                    |
|                             |                       | Pasadena        | 4                | 4                | 6                | 5                    |
|                             |                       | Rio Hondo       | 5                | 1                | 4                | 3                    |
|                             |                       | Santa Ana       | -                | 2                | 4                | 2                    |
| <b>Supply Total/Average</b> |                       |                 | <b>106</b>       | <b>138</b>       | <b>119</b>       | <b>121</b>           |

## Appendix A: Occupational demand and wage data by county

Due to the wide range in salaries and entrepreneurial nature of work, all wage information for craft artists has been excluded from this report.

### Exhibit 3. Los Angeles County

| Occupation (SOC)                              | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings | Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile) | Median Hourly Earnings | Experienced Hourly Earnings (75 <sup>th</sup> Percentile) |
|---|-----------|-----------|-------------|---------------|-----------------|---|------------------------|---|
| Craft Artists (27-1012)                       | 1,926     | 2,044     | 118         | 6%            | 240             | -   | -                      | -   |
| Commercial and Industrial Designers (27-1021) | 1,504     | 1,467     | (37)        | (2%)          | 150             | \$23.75   | \$31.29                | \$44.93   |
| Cabinetmakers and Bench Carpenters (51-7011)  | 3,258     | 2,797     | (461)       | (14%)         | 317             | \$12.17   | \$16.04                | \$21.34   |
|   | 6,688     | 6,308     | (380)       | (6%)          | 707             |   |                        |   |

### Exhibit 4. Orange County

| Occupation (SOC)                              | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings | Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile) | Median Hourly Earnings | Experienced Hourly Earnings (75 <sup>th</sup> Percentile) |
|---|-----------|-----------|-------------|---------------|-----------------|---|------------------------|---|
| Craft Artists (27-1012)                       | 315       | 336       | 21          | 7%            | 39              | -   | -                      | -   |
| Commercial and Industrial Designers (27-1021) | 645       | 651       | 6           | 1%            | 67              | \$24.68   | \$32.08                | \$45.97   |
| Cabinetmakers and Bench Carpenters (51-7011)  | 1,419     | 1,458     | 39          | 3%            | 160             | \$12.84   | \$16.93                | \$22.39   |
|   | 2,379     | 2,445     | 66          | 3%            | 266             |   |                        |   |

**Exhibit 5. Los Angeles and Orange Counties**

| <b>Occupation (SOC)</b>                       | <b>2019 Jobs</b> | <b>2024 Jobs</b> | <b>5-Yr Change</b> | <b>5-Yr % Change</b> | <b>Annual Openings</b> | <b>Entry-Level Hourly Earnings (25<sup>th</sup> Percentile)</b> | <b>Median Hourly Earnings</b> | <b>Experienced Hourly Earnings (75<sup>th</sup> Percentile)</b> |
|---|------------------|------------------|--------------------|----------------------|------------------------|---|-------------------------------|---|
| Craft Artists (27-1012)                       | 2,241            | 2,380            | 139                | 6%                   | 280                    | -   | -                             | -   |
| Commercial and Industrial Designers (27-1021) | 2,149            | 2,118            | (31)               | (1%)                 | 217                    | \$24.18   | \$31.60                       | \$45.37   |
| Cabinetmakers and Bench Carpenters (51-7011)  | 4,677            | 4,255            | (422)              | (9%)                 | 476                    | \$12.36   | \$16.28                       | \$21.65   |
|   | 9,067            | 8,753            | (314)              | (3%)                 | 973                    |   |                               |   |

**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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