

Labor Market Analysis for:
1009.00 Applied Design (Studio Arts/Glassblowing)
Inland Empire/Desert Center of Excellence, March 2025
 Prepared by: Christopher Cruzcosa, ccruzcosa@iegocollabortive.org



Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Program LMI Endorsement Criteria		
Supply Gap	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments: There is projected to be 182 annual job openings throughout the Inland Empire/Desert region, which is more than the 21 annual average awards conferred by educational institutions over the last 3 years. Supply data includes both community college awards (0) and non-community college awards (21).</i>	
Living Wage	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments: All (100%) of annual job openings for these two occupations have entry-level hourly wages below the IE/D living wage of 20.42.¹</i>	
Education	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments: Most job postings for target occupations require a high school diploma or equivalent (93%). See Exhibits 8 and 9 for more details.</i>	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Below Middle-Skill (typically require training/education at or below a HS diploma)
 - Molders, Shapers, and Casters, Except Metal and Plastic (51-9195)
- Above Middle-Skill (typically require a bachelor’s degree or above)
 - Fine Artists, Including Painters, Sculptors, and Illustrators (27-1013)

Summary of findings

Demand

- The number of jobs related to the assessed occupations is projected to increase 11% through 2028, with 182 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are below living wage at the 25th percentile hourly wage ranging from \$4.80 to \$18.66 in IE/D.
- There were 187 online job postings from 79 employers over the past 12 months with the highest postings for “Mill Operators” and “Mixer Operators”.
- Most job postings for target occupations require a high school diploma or equivalent (93%), followed by a bachelor’s degree (7%), associate degree (0%), and above a bachelor’s degree (0%).

Supply

- On average, there were 21 annual awards conferred by educational institutions over the last 3 years in related fields: 0 from community colleges and 21 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2021-22 academic year earned a median annual wage of \$23,010 (approximately \$11.06 per hour).
- For California, 37% of students that exited their program in 2021-22 reported that they are earning a living wage.

¹ The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

Introduction

California Community College Applied Design (TOP 1009.00) programs prepare students for employment in theory and studio work in the application of esthetic principles to the design of useful and decorative objects and spaces (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Applied Design programs lead to employment in occupations related to studio arts.

Job Demand

In 2023, there were 1,333 jobs in occupations related to studio arts in the IE/D region. Regional employment for this occupation group is projected to increase by 11% through 2028 with 182 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

Exhibit 1. Five-year projections for occupations related to studio arts, IE/D Region, 2023-2028

Occupation	SOC	2023 Jobs	2028 Jobs	2023 - 2028 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Fine Artists, Including Painters, Sculptors, and Illustrators	27-1013	684	802	17%	462	92
Molders, Shapers, and Casters, Except Metal and Plastic	51-9195	649	671	3%	448	90
Total		1,333	1,473	11%	910	182

SOURCE: LIGHTCAST 2025.1

Job Postings

The following analysis for occupations related to studio arts using online job posting data.

Important note: The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.² While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to studio arts over the last 12 months and the median posting duration. Over the previous 12 months, there were 187 unique job postings for occupations related to studio arts in the region from 79 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, Mar 2024 – Feb 2025

Job Title	Job Ads	Median Posting Duration
Molders, Shapers, and Casters, Except Metal and Plastic	137	25 days
Fine Artists, Including Painters, Sculptors, and Illustrators	50	32 days
Total	187	

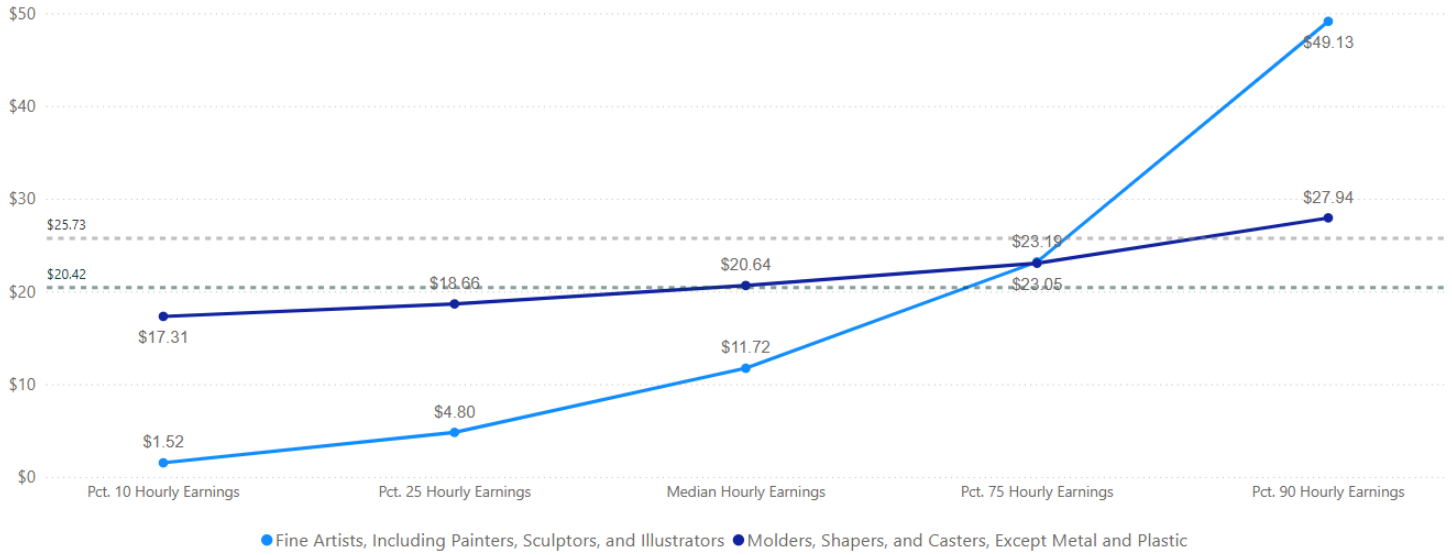
SOURCE: LIGHTCAST 2025.1

² "Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, <https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology>

Earnings

Exhibit 3 displays the hourly earnings for occupations related to studio arts compared to both the UW Self-Sufficiency Standard for the IE/D of \$20.42³ and the MIT IE/D living wage of \$25.73.⁴

Exhibit 3. Projected hourly earnings by percentile, IE/D Region, 2023



Description	Pct. 10 Hourly Earnings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Pct. 90 Hourly Earnings
Fine Artists, Including Painters, Sculptors, and Illustrators	\$1.52	\$4.80	\$11.72	\$23.19	\$49.13
Molders, Shapers, and Casters, Except Metal and Plastic	\$17.31	\$18.66	\$20.64	\$23.05	\$27.94

SOURCE: 2025.1

All projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) were below the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3). The occupations listed were also below the MIT living wage for an adult with no children (\$25.73) in projected entry-level earnings (see Exhibit 3).

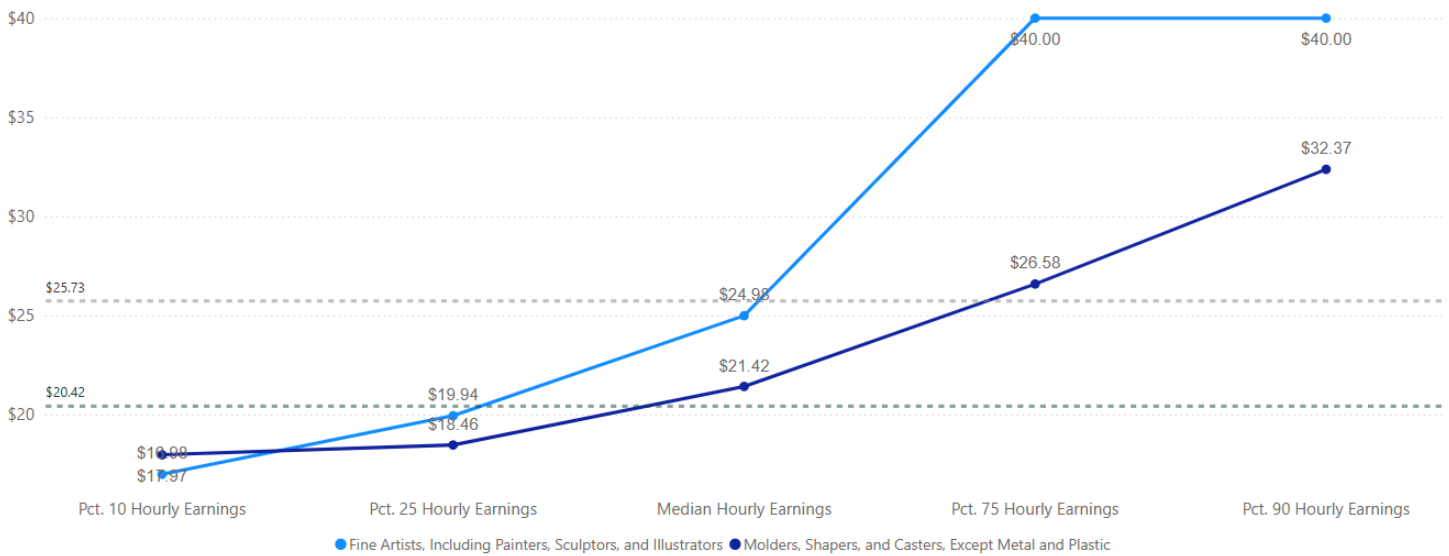
³ The UW self-sufficiency standard is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

⁴ *ibid.*

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to studio arts over the last 12 months. The salary information of online job ad data suggests employers advertise entry level hourly wages between \$18.46 and \$19.94 (estimated to be equal to an annual salary between \$38,396 and \$41,475).

Exhibit 4. Hourly earnings of job postings by percentile, IE/D Region, Mar 2024 – Feb 2025



Description	Pct. 10 Hourly Earnings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Pct. 90 Hourly Earnings
Fine Artists, Including Painters, Sculptors, and Illustrators	\$16.98	\$19.94	\$24.98	\$40.00	\$40.00
Molders, Shapers, and Casters, Except Metal and Plastic	\$17.97	\$18.46	\$21.42	\$26.58	\$32.37

SOURCE: LIGHTCAST 2025.1

Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to studio arts over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

Exhibit 5. Job titles most frequently used in job ads, IE/D Region, Mar 2024 – Feb 2025

Job Title	Unique Postings
Mill Operators	15
Mixer Operators	8
Mold Makers	8
Trappers	8
Composite Technicians	7
Foundry Managers	7
Blow Mold Operators	6
Injection Mold Operators	6
Furnace Operators	5
Teaching Artists	5

SOURCE: LIGHTCAST 2025.1

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. “Nellson Nutraceutical” and “Niagara Bottling” had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are deduplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast’s Job Posting Analytics dashboard.

Exhibit 6. Employers posting the most job ads, IE/D Region, Mar 2024 – Feb 2025

Company	Total/Unique (Mar 2024 - Feb 2025)	Posting Intensity	Median Posting Duration
Nellson Nutraceutical	48 / 8	6 : 1	42 days
Niagara Bottling	82 / 8	10 : 1	20 days
Viant Medical	21 / 8	3 : 1	20 days
Vpet USA	12 / 6	2 : 1	13 days
Insomniac	5 / 5	1 : 1	39 days
Northwest Pipe Company	9 / 5	2 : 1	25 days
Heartbeat Music And Performing Arts Academy	10 / 5	2 : 1	28 days
Samuel, Son & Co., Limited	26 / 4	7 : 1	23 days
Jm Eagle	10 / 4	3 : 1	17 days
Genysis Brand Solutions	12 / 4	3 : 1	n/a

SOURCE: LIGHTCAST 2025.1

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today’s demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole.⁵

Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Region, Mar 2024 – Feb 2025

Common skills	Total Postings	Skill Growth Relative to Market
Communication	54	Lagging
Operations	43	Stable
Troubleshooting (Problem Solving)	39	Growing
Management	31	Stable
Detail Oriented	29	Stable
Lifting Ability	29	Growing
Problem Solving	27	Growing
Quality Control	24	Growing
Packaging And Labeling	21	Growing
Sanitation	20	Growing

⁵ “What are Lightcast Skill Projects”, Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

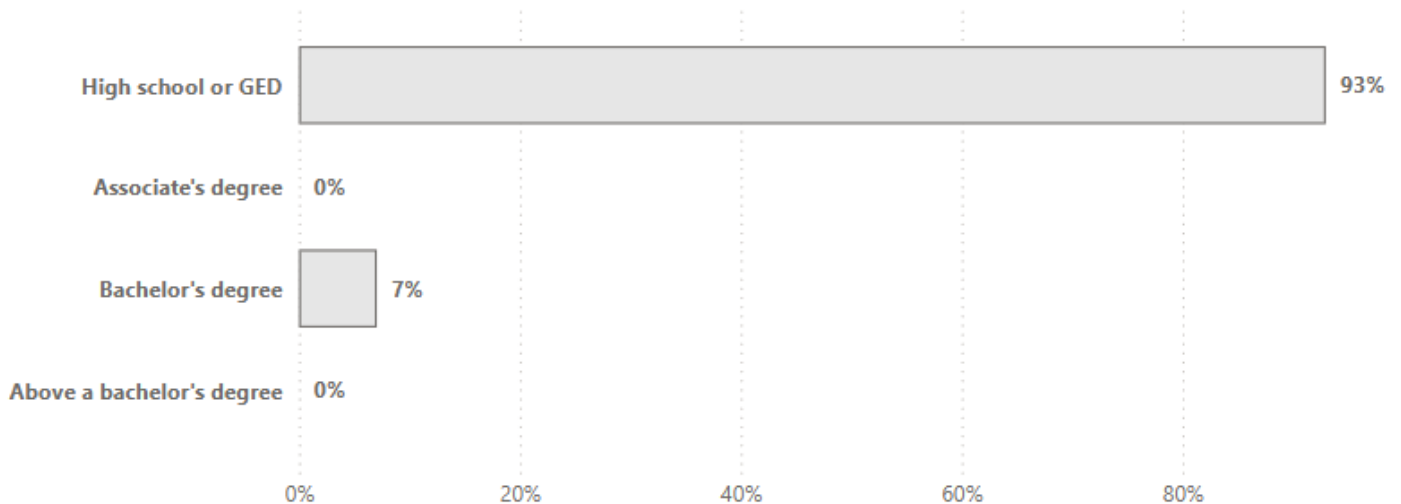
Specialized skills	Total Postings	Skill Growth Relative to Market
Forklift Truck	40	Stable
Machinery	36	Stable
Good Manufacturing Practices	30	Growing
General Mathematics	29	Growing
Calipers	23	Rapidly Growing
Tooling	23	Rapidly Growing
Housekeeping	21	Growing
Grinding	18	Growing
Injection Molding	18	Growing
Grinding Machine	17	Growing

Computer Skills	Total Postings	Skill Growth Relative to Market
Adobe Illustrator	7	Growing
Microsoft Excel	5	Growing
Microsoft Office	5	Growing
Microsoft Word	5	Stable
Adobe Photoshop	4	Growing
Adobe InDesign	3	Growing
Adobe Creative Suite	2	Growing
Adobe Flash	2	Growing
Content Management Systems	2	Stable
Project Management Software	2	Stable

SOURCE: LIGHTCAST 2025.1

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with a high school diploma or equivalent (93%) significantly greater than bachelor's degree (7%) or associate degree (0%) or above a bachelor's degree (0%).

Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Mar 2024 – Feb 2025



SOURCE: LIGHTCAST 2025.1

For the assessed occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 24% and 27% of workers have completed some college or an associate degree as their highest level of education.

Exhibit 9 National-level Education Attainment for Occupations

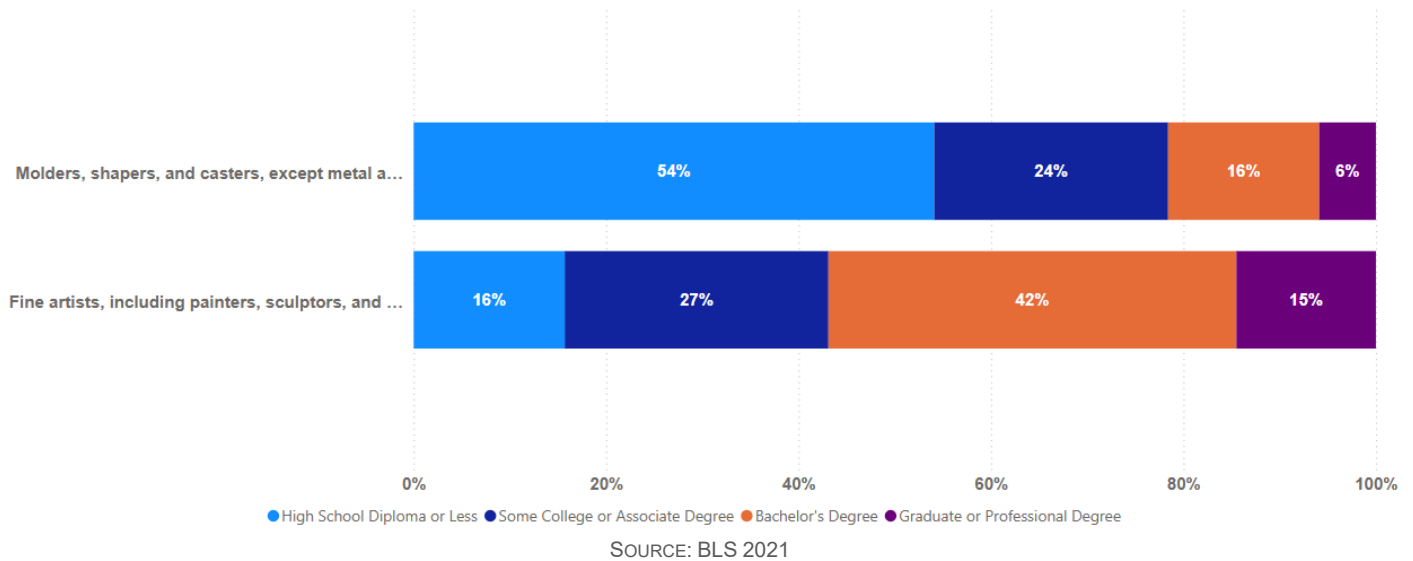
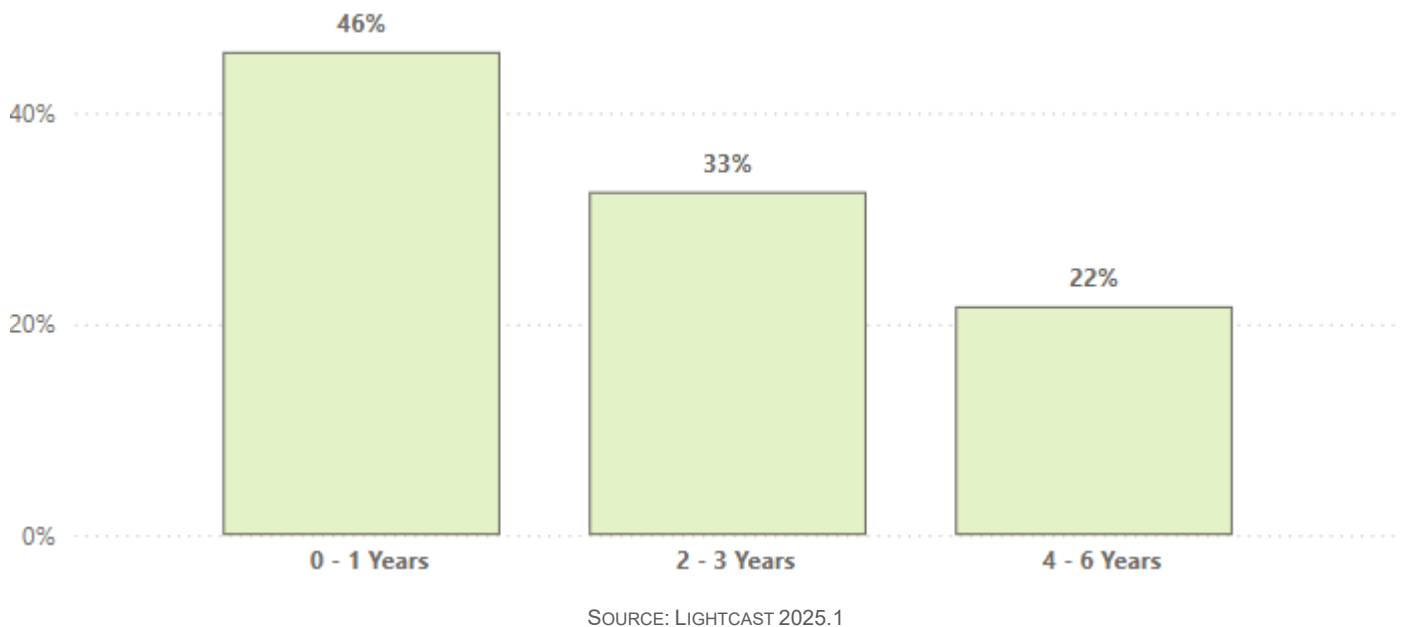


Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The plurality (46%) of employers listing minimum experience requirements sought candidates with 0-1 years of previous work experience.

Exhibit 10 Work experience requirements, IE/D Region, Mar 2024 – Feb 2025



Student Completions and Program Outcomes

No student completions for the Applied Design (TOP 1009.00) programs were found over the last three academic years (2020-2023). Based on the lack of data, it appears that in the previous three academic years, 0 regional community colleges issued an average of 0 awards in relevant programs.

Non-Community College Supply

Exhibit 11 displays award completion data available for these IE/D non-community college programs: Design and Visual Communications, General (CIP 50.0401).

In the previous three academic years, two regional non-community college institutions issued an average of 21 awards in relevant programs.

Exhibit 11 Annual average non-community college awards for studio arts programs, IE/D, 2019-2022

CIP	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
50.0401	Design and Visual Communications, General	Platt College-Ontario	2	4	5	4
50.0401	Design and Visual Communications, General	University of Redlands	14	20	18	17
Total			16	24	23	21

SOURCE: IPEDS

Strong Workforce Program Outcomes

California SWP program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12.

Exhibit 12 Applied Design strong workforce program outcomes, IE/D & California, most recent academic year

Program Metric Title	Inland Empire	Statewide
Students	92	2,601
Earned 9+ Career Education Units	17%	26%
Completed Noncredit Workforce Preparation Milestone		58%
Transferred to a Four-Year Institution: Four-Year Postsecondary Institution		9%
Median Annual Earnings	\$23,010	\$32,184
Median Change in Earnings		35%
Attained Living Wage		37%

SOURCE: LAUNCHBOARD

Appendix: Methodology

Exhibit 12 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2020 and 2023 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2023a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS) administered by Santa Rosa Junior College (LaunchBoard, 2023a).

Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	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. https://lightcast.io/
Living Wage (UW)	Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. http://www.selfsufficiencystandard.org/ . This calculation measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. The living wage for one adult in San Bernardino County is \$20.07 per hour (\$42,392 annually). The living wage for one adult in Riverside County is \$20.76 per hour (\$43,854 annually). The average living wage to represent Inland Empire/Desert is \$20.42 per hour (\$43,123 annually).
Living Wage (MIT)	The living wage is derived from MIT's Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: https://livingwage.mit.edu/pages/methodology The living wage for one adult in San Bernardino County is \$25.17 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$26.30 per hour (\$54,704 annually). The average living wage to represent Inland Empire/Desert is \$25.74 per hour (53,539.20 annually)
Typical Education and Training Requirements, and Educational Attainment	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 https://www.bls.gov/emp/documentation/education/tech.htm
Educational Supply	The CCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu 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 https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions

Student Metrics and Demographics	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: https://www.calpassplus.org/LaunchBoard/Home.aspx
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