

# Labor Market Analysis for: 0614.00 Digital Media

Inland Empire/Desert Center of Excellence, November 2024

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## 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		
<b>Supply Gap</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments: There is projected to be 500 annual job openings throughout the Inland Empire/Desert region, which is more than the 94 annual average awards conferred by educational institutions over the last 3 years. Supply data includes both community college awards (94) and non-community college awards (0).</i>	
<b>Living Wage</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments: The minority (15%) of annual job openings for these four occupations have entry-level hourly wages above the IE/D living wage of 20.42.<sup>1</sup></i>	
<b>Education</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments: Most job postings for target occupations require an associate degree or high school diploma or equivalent (52%). 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 less than a HS diploma)
  - Photographers (27-4021)
- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor's degree)
  - Prepress Technicians and Workers (51-5111)
- Above Middle-Skill (typically require a bachelor's degree)
  - Special Effects Artists and Animators (27-1014)
  - Graphic Designers (27-1024)
  - Web and Digital Interface Designers (15-1255)

## Summary of findings

### Demand

- The number of jobs related to the assessed occupations is projected to increase 5% through 2028, with 500 annual job openings (new and replacement jobs).
- Hourly entry-level wages for one of the five occupations are above living wage at the 25<sup>th</sup> percentile hourly wage, while four of the five were below the living wage. The entry level wages for all occupations range from \$9.14 to \$23.87 in IE/D.
- There were 830 online job postings from 310 employers over the past 12 months with the highest postings for graphic designers and photographers.
- Most job postings for target occupations require a bachelor's degree (48%), followed by high school diploma or equivalent (43%), associate degree (9%), and above a bachelor's degree (1%).

### Supply

- On average, there were 94 annual awards conferred by educational institutions over the last 3 years in related fields: 94 from community colleges and 0 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 \$30,476 (\$14.65 per hour).
- 64% of students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.
- Community college programs play an important role diversifying the talent pipeline in these occupations. Most IE/D professionals in digital arts occupations are White (51%), "early career" or "mid-career" age categories (71%), and equally male (50%) and female (50%). Most community college students in related programs are Hispanic/Latino (54%), "pre-college/career" age category (63%), and male (51%).

<sup>1</sup> 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 Digital Media (TOP 0614.00) programs prepare students for employment in a broad range of programs that combine computer and other electronic technologies with skills and techniques from various fine arts and communications disciplines (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Digital Media programs lead to employment in occupations related to digital arts.

## Job Demand

In 2023, there were 5,193 jobs in occupations related to digital arts in the IE/D region. Regional employment for this occupation group is projected to increase by 5% through 2028 with 500 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 digital 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)
Web and Digital Interface Designers	15-1255	771	860	12%	374	75
Special Effects Artists and Animators	27-1014	294	326	11%	175	35
Graphic Designers	27-1024	2,420	2,514	4%	1,088	218
Photographers	27-4021	1,565	1,621	4%	777	155
Prepress Technicians and Workers	51-5111	143	132	-7%	86	17
<b>Total</b>		<b>5,193</b>	<b>5,453</b>	<b>5%</b>	<b>2,499</b>	<b>500</b>

SOURCE: LIGHTCAST 2024.2

## Job Postings

The following analysis for occupations related to digital 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.<sup>2</sup> 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 digital arts over the last 12 months and the median posting duration. Over the previous 12 months, there were 830 unique job postings for occupations related to digital arts in the region from 310 employers.

**Exhibit 2. Job ads and posting duration, IE/D Region, Oct 2023 – Sep 2024**

Job Title	Job Ads	Median Posting Duration
Photographers	361	27 days
Graphic Designers	251	24 days
Web and Digital Interface Designers	156	20 days
Special Effects Artists and Animators	42	31 days
Prepress Technicians and Workers	20	19 days
<b>Total</b>	<b>830</b>	

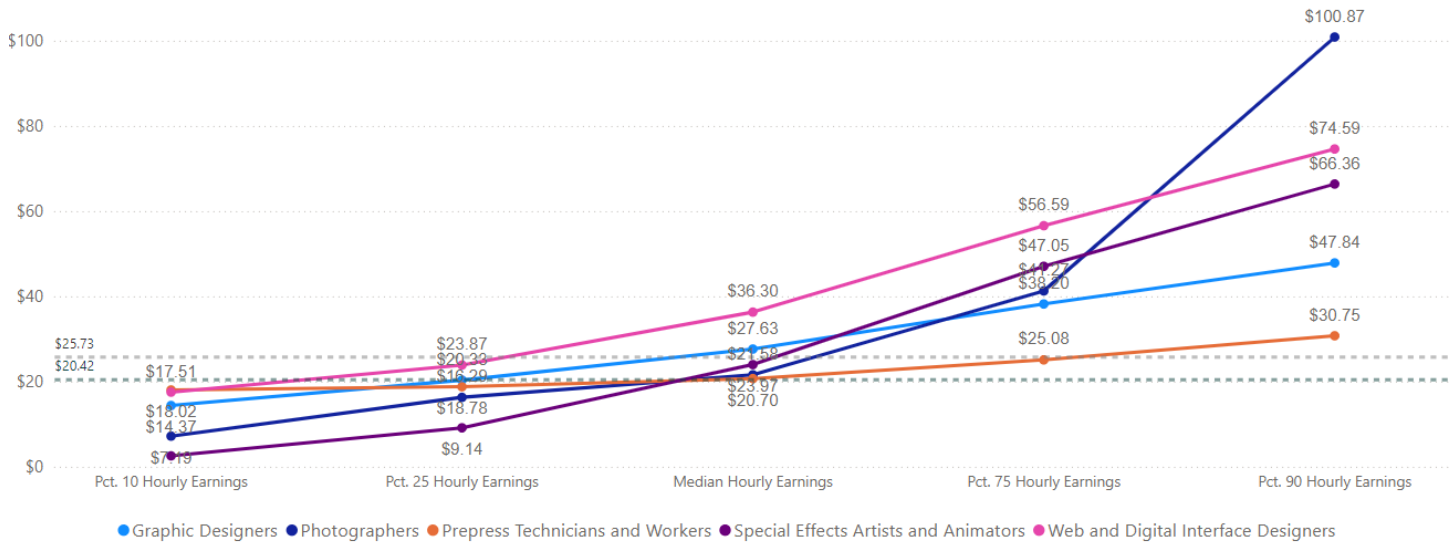
SOURCE: LIGHTCAST 2024.2

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

# Earnings

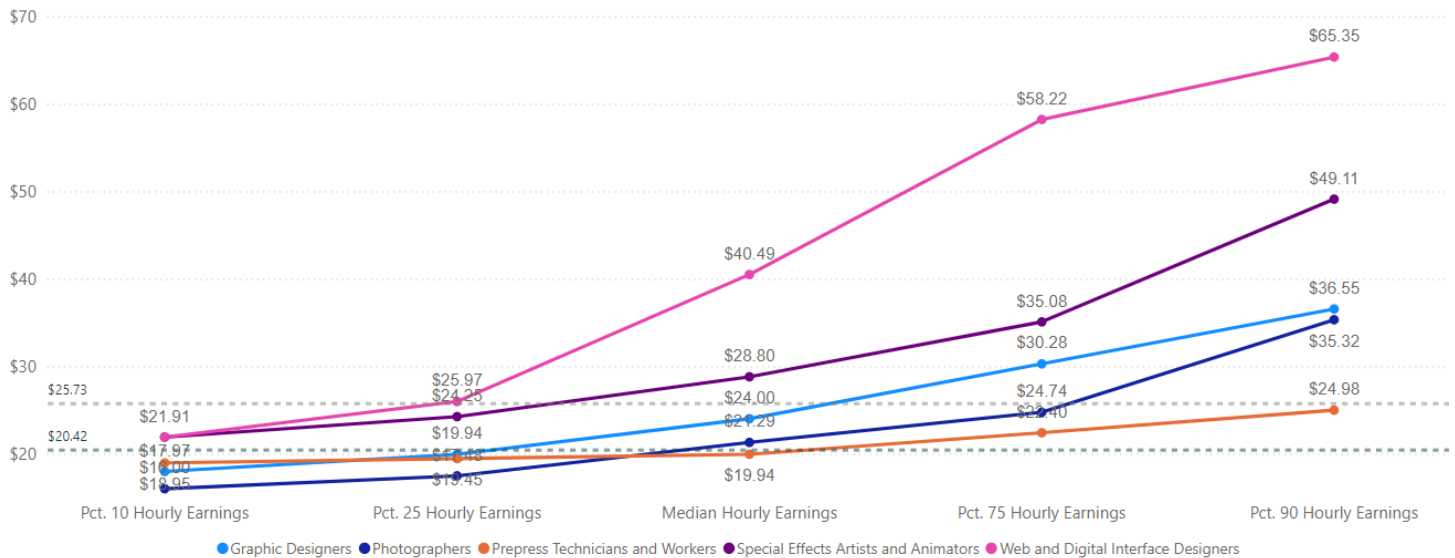
Exhibit 3a displays the hourly earnings for occupations related to digital arts and Exhibit 3b displays the hourly earnings for job postings of the same occupations and compares both to the UW Self-Sufficiency Standard for the IE/D<sup>3</sup> and the MIT IE/D living wage of \$25.73.<sup>4</sup> The living wage criteria is determined using the data in exhibit 3a but Exhibit 3b is also shown to provide regional context using job posting data.

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



SOURCE: LIGHTCAST 2024.2

**Exhibit 3b. Hourly earnings of job postings by percentile, IE/D Region, 2023**



SOURCE: LIGHTCAST 2024.2

The projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) for 4 of the 5 occupations were below the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3a). All occupations were below the MIT living wage for an adult with no children (\$25.73) in projected entry-level earnings (see Exhibit 3a).

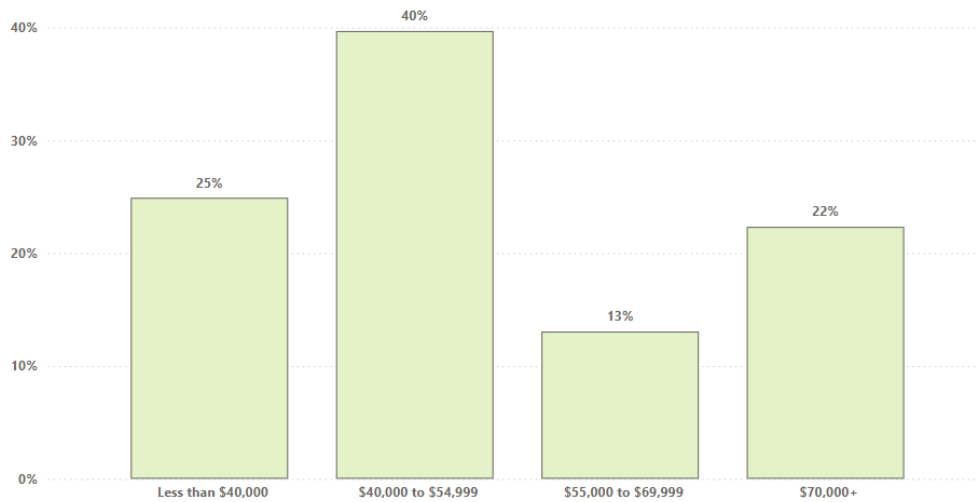
<sup>3</sup> The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional 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.

<sup>4</sup> *ibid.*

## Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to digital arts over the last 12 months. Online job ad salary information data suggests most (65%) employers advertise an annual salary either less than \$40,000 (\$19.23 per hour) or equal to \$40,000 to \$54,999 (\$19.23 to \$26.44 per hour).

**Exhibit 4. Online advertised salaries for occupations related to digital arts, IE/D Region, Oct 2023 – Sep 2024**



SOURCE: LIGHTCAST 2024.2

## 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 digital 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, Oct 2023 – Sep 2024**

Job Title	Unique Postings
Graphic Designers	125
Photographers	79
Videographers/Photographers	24
Vehicle Photographers	21
Photographers/Sales Associates	19
Portrait Photographers	18
Automotive Photographers	17
Retail Sales Associates/Photographers	14
Graphic Artists	13
Newborn Photographers	12

SOURCE: LIGHTCAST 2024.2

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. “Esri” and “Shutterfly” 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, Oct 2023 – Sep 2024**

Company	Total/Unique (Oct 2023 - Sep 2024)	Posting Intensity	Median Posting Duration
Esri	101 / 41	2 : 1	37 days
Shutterfly	48 / 29	2 : 1	23 days
Merit America	45 / 28	2 : 1	19 days
Cherished Memories Photography	54 / 18	3 : 1	38 days
Cherry Hill Programs	22 / 15	1 : 1	22 days
Summit Portraits	141 / 14	10 : 1	22 days
Inland Empire Health Plan	42 / 13	3 : 1	20 days
Np Mechanical, Inc., Rice Services	23 / 10	2 : 1	2 days
Pro Motion Pix	25 / 10	3 : 1	36 days
Image Plus	22 / 9	2 : 1	42 days

SOURCE: LIGHTCAST 2024.2

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.<sup>5</sup>

**Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Region, Oct 2023 – Sep 2024**

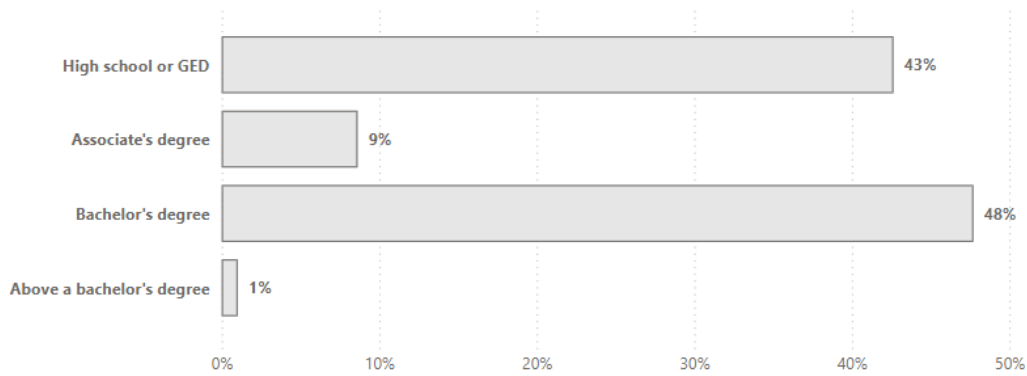
Common skills	Total Postings	Skill Growth Relative to Market
Communication	290	Lagging
Customer Service	185	Stable
Detail Oriented	175	Stable
Sales	162	Stable
Editing	113	Rapidly Growing
Management	82	Stable
Operations	75	Stable
Time Management	70	Growing
Ability To Meet Deadlines	69	Growing
Organizational Skills	69	Growing
Specialized skills	Total Postings	Skill Growth Relative to Market
Photography	261	Rapidly Growing
Adobe Photoshop	191	Growing
Graphic Design	184	Growing
Adobe Illustrator	170	Growing
Marketing	150	Rapidly Growing
Adobe Creative Suite	126	Growing
Adobe InDesign	113	Growing
Project Management	70	Rapidly Growing
User Experience (UX) Design	66	Growing
Typography	59	Stable
Computer Skills	Total Postings	Skill Growth Relative to Market
Adobe Photoshop	191	Growing
Adobe Illustrator	170	Growing
Adobe Creative Suite	126	Growing
Adobe InDesign	113	Growing
Microsoft Office	52	Growing
HyperText Markup Language (HTML)	50	Growing
Cascading Style Sheets (CSS)	45	Rapidly Growing
Microsoft Excel	45	Growing
Microsoft PowerPoint	45	Rapidly Growing
Adobe After Effects	42	Lagging

SOURCE: LIGHTCAST 2024.2

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

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with bachelor's degree (48%), significantly greater than associate degree (9%), or High school diploma or equivalent (43%), or above a bachelor's degree (1%).

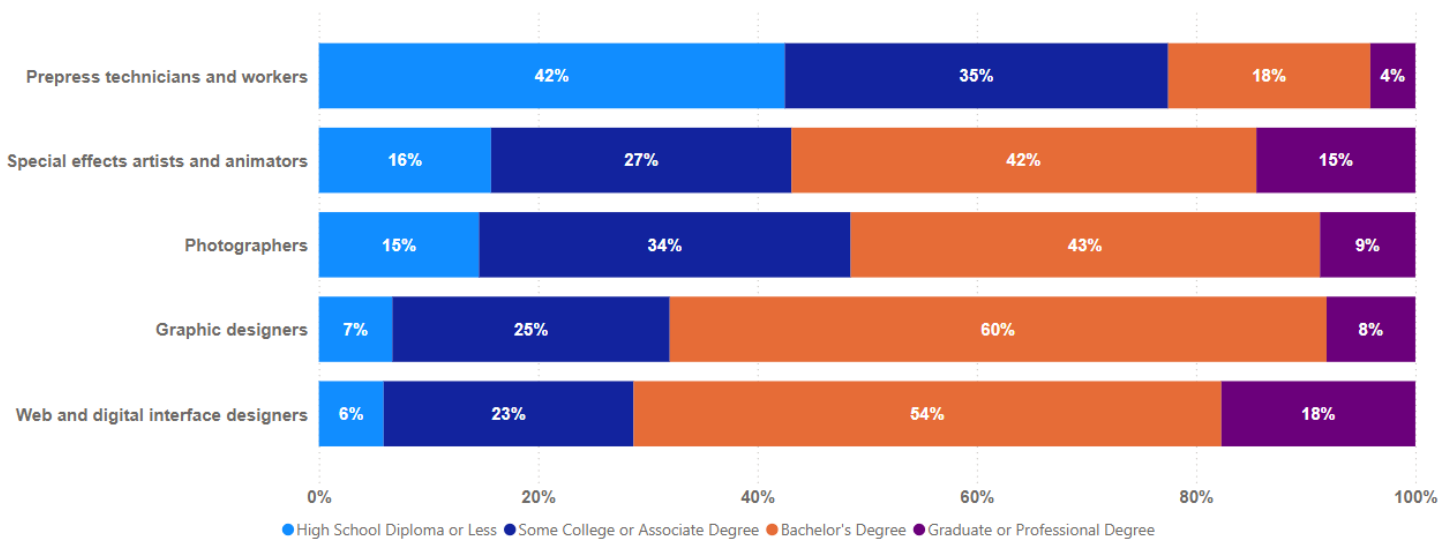
**Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Oct 2023 – Sep 2024**



SOURCE: LIGHTCAST 2024.2

For the middle-skill occupations and below middle-skill occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 34% and 35% of workers have completed some college or an associate degree as their highest level of education. For the above middle-skill occupations, between 42% and 60% have completed a bachelor's degree.

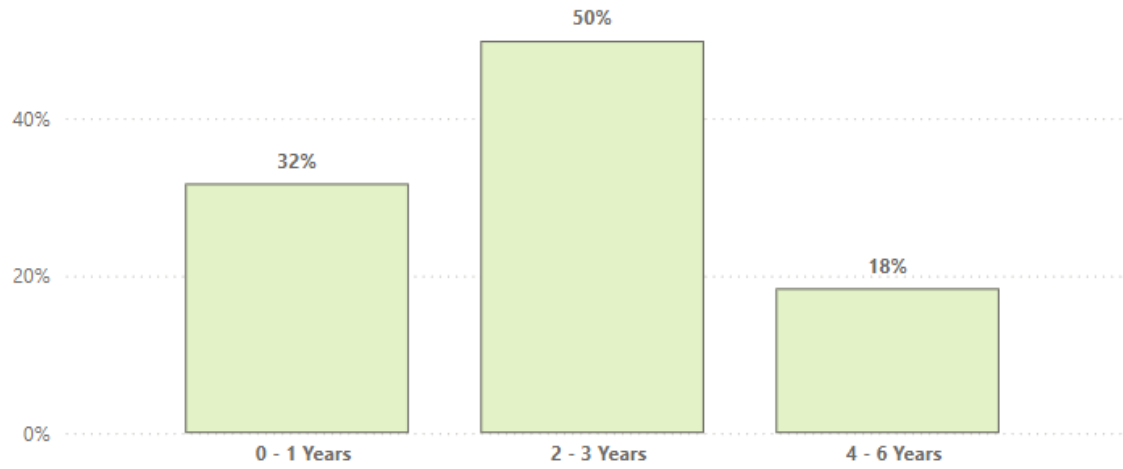
**Exhibit 9 National-level Education Attainment for Occupations**



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The majority (50%) of employers listing minimum experience requirements sought candidates with 2-3 years of previous work experience.

**Exhibit 10 Work experience requirements,  
IE/D Region, Oct 2023 – Sep 2024**



SOURCE: LIGHTCAST 2024.2

# Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Digital Media (TOP 0614.00) programs over the last three academic years (2020-2023). In the previous three academic years, six regional community colleges issued an average of 94 awards in relevant programs.

**Exhibit 11 Annual average community college awards for Digital Media (TOP 0614.00), IE/D, 2020-2023**

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
0614.00	Digital Media	Riverside	17	43	44	35
0614.00	Digital Media	Norco College	9	35	26	23
0614.00	Digital Media	Mt. San Jacinto	17	14	26	19
0614.00	Digital Media	Palo Verde	0	20	10	10
0614.00	Digital Media	Victor Valley	0	5	9	5
0614.00	Digital Media	Crafton Hills	0	2	4	2
<b>Total</b>			<b>43</b>	<b>119</b>	<b>119</b>	<b>94</b>

SOURCE: MIS DATA MART

## Non-Community College Supply

Award completion data was not found in the IE/D for related non-community college programs: Digital Communication and Media/Multimedia (CIP 09.0702), Prepress/Desktop Publishing and Digital Imaging Design (CIP 10.0303), Digital Arts (CIP 50.0102).

In the previous three academic years, three regional non-community college institutions issued an average of 0 awards in relevant programs.

## 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 13.

**Exhibit 13 Digital Media strong workforce program outcomes, IE/D & California, most recent academic year**

Program metric title	Inland Empire/Desert	Statewide
Attained a living wage (completers and skills-builders)	52%	39%
Completed 9+ career education units in one year	34%	31%
Job closely related to the field of study	64%	55%
Median annual earnings (all exiters)	\$30,476	\$31,988
Students who attained a noncredit workforce milestone in a year	40%	80%
Students who earned a degree, certificate, or attained apprenticeship	49	379
Unduplicated count of enrolled students	985	8,663

SOURCE: LAUNCHBOARD

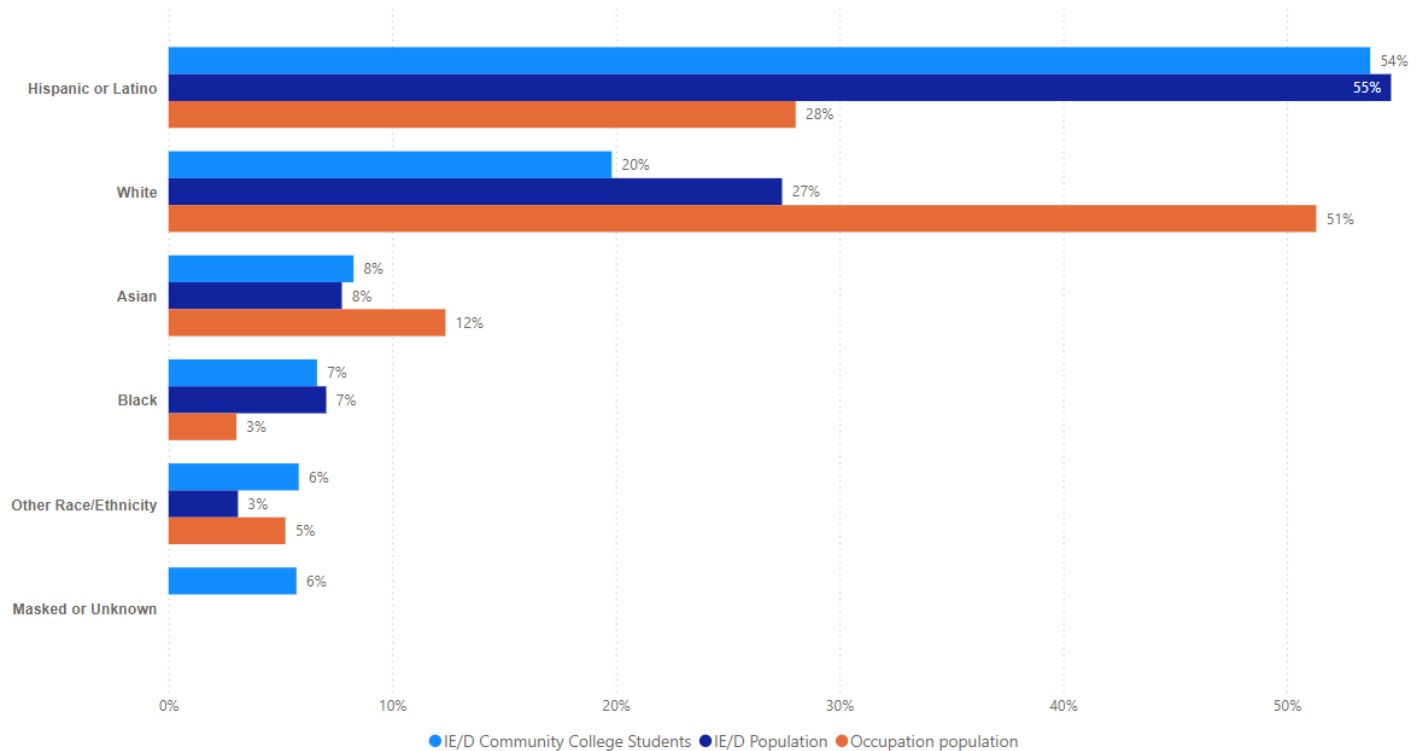
# Building an Inclusive Economy

This section examines demographic data for IE/D community college students in Digital Media programs compared to the IE/D population. We also include demographics for related occupation data for the four occupations related to digital arts. This analysis can be used to:

- Understand the community college system’s current or potential role supporting a diverse talent pipeline into the occupations of interest.
- Inform students (and the faculty and staff working with them) the extent to which individuals from similar demographic groups are over or underrepresented in the professions related to their field of study.
- Inform employers of the diverse talent pipeline coming from the community college system for the occupations analyzed.

Notably, 54% of students enrolled in Digital Media programs are Hispanic/Latino, which is significantly higher than Hispanic/Latino workers in occupations related to digital arts in the IE/D region (28%). Additionally, 51% of the IE/D population that are employed in occupations related to digital arts are White, which is significantly higher than both IE/D community college students (20%) and IE/D population (27%). Though only 3% of the workers employed in occupations related to digital arts are Black, 7% of students in Digital Media programs and 7% of the IE/D population are Black.

**Exhibit 14 Program and County Demographics by Ethnicity**



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

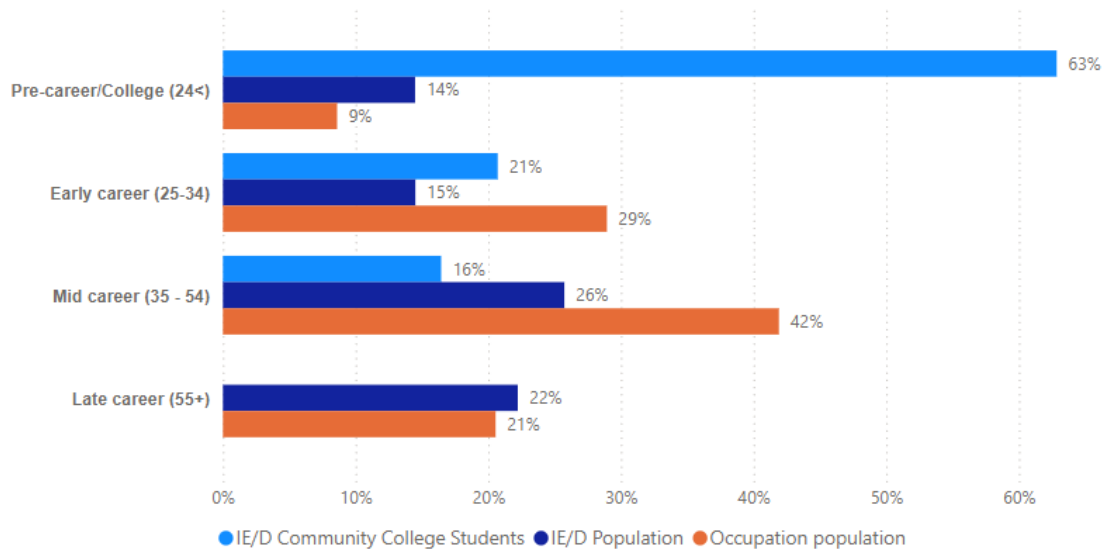
Most IE/D professionals in digital arts occupations are White (51%), “early career” or “mid-career” age categories (71%), and equally male (50%) and female (50%). Most community college students in related programs are Hispanic/Latino (54%), “pre-college/career” age category (63%), and male (51%). Major takeaways:

- Community colleges are an important talent source for employers committed to greater racial/ethnic diversity, especially Hispanic/Latino and Black professionals, in comparison to this field.
- College programs may want to consider strategies to engage more women into these programs.

Exhibit 15 compares the age of IE/D community college students enrolled in Digital Media programs compared to the IE/D population.

The majority of students enrolled in Digital Media programs are in the “pre-college/career” category (63%) as compared to IE/D population (14%) and workforce (9%) in these four occupations related to digital arts. These programs are an important entry point for young digital arts professionals.

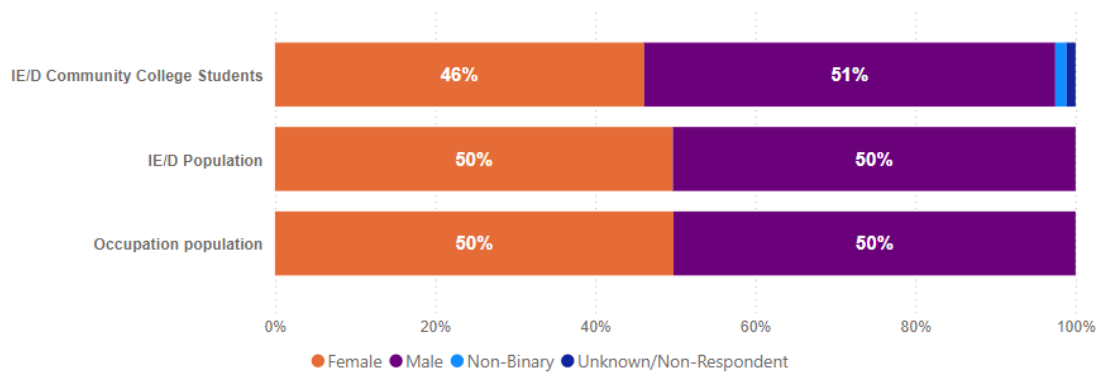
**Exhibit 15 Program and County Demographics by Age**



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Exhibit 16 compares the gender of IE/D Region community college students enrolled in Digital Media programs compared to the IE/D population. We also include demographics for related occupation data for the four occupations related to digital arts to identify potential diversity and equity issues addressable by community college programs.

**Exhibit 16 Program and County Demographics by Gender**



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

## Appendix: Methodology

Exhibit 13 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. <a href="https://lightcast.io/">https://lightcast.io/</a>
Living Wage (UW)	Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. <a href="http://www.selfsufficiencystandard.org/">http://www.selfsufficiencystandard.org/</a> .  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: <a href="https://livingwage.mit.edu/pages/methodology">https://livingwage.mit.edu/pages/methodology</a> 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 <a href="https://www.bls.gov/emp/documentation/education/tech.htm">https://www.bls.gov/emp/documentation/education/tech.htm</a>
Educational Supply	The CCCCO 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> 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>

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: <a href="https://www.calpassplus.org/LaunchBoard/Home.aspx">https://www.calpassplus.org/LaunchBoard/Home.aspx</a>
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