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Labor Market Analysis

Multimedia Design



Prepared by Central Valley/Mother Lode Center of Excellence



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COVID-19 Statement: This report includes employment projection data by Lightcast. Lightcast’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

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Summary

The Central Valley/Mother Lode Center of Excellence developed this report for College of the Sequoias to determine whether there is demand in the local labor market that is not being met by the supply from community college programs. This report summarizes labor market demand, wages, skills, and postsecondary supply for *Multimedia Design Occupations*, which include:

- Web and Digital Interface Designers (SOC 15-1255)
- Special Effects Artists and Animators (SOC 27-1014)
- Graphic Designers (SOC 27-1024)

Key Findings

- **Occupational Demand** — *Multimedia Design Occupations* have a labor market demand of 91 annual job openings in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. Between 2021 and 2026, graphic designers are projected to have the most demand with 64 annual job openings and a projected growth rate of 10 percent.
- **Wages** — Average entry-level earnings of \$23.95/hour for *Multimedia Design Occupations* are higher than the living wage in the SCV/SML subregion, which is \$11.91/hour for a single adult.¹ Special effects artists and animators earn the highest entry-level wage, \$32.60/hour.
- **Employers and Job Titles** — Employers in the SCV/SML subregion include Root Creative Marketing, Fastsigns, and Vineyard Vines. The most common job title is graphic designers.
- **Skills** — The top baseline skill is communications, the top specialized skill is graphic design, and the top software skill is Adobe Photoshop.
- **Education** — A bachelor's degree is typically required for all three *Multimedia Design Occupations*.
- **Supply and Demand Analysis** — Based on 91 annual openings (i.e., demand), and 6 postsecondary degrees awarded (i.e., supply), an analysis of supply and demand suggests there is an undersupply of 85 workers in the SCV/SML subregion.

Recommendation

Based on a comparison of demand and supply, there is an undersupply of trained workers in the SCV/SML subregion and the CVML region. The Center of Excellence recommends that College of the Sequoias work with the regional directors, the college's advisory board, and local industry when discussing the expansion or modification of relevant programs.

¹ The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

Introduction

The Central Valley/Mother Lode Center of Excellence developed this report to provide College of the Sequoias with labor market information for Multimedia Design. The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use. Analysis of the program and occupational data related to Multimedia Design resulted in the identification of applicable occupations, known as *Multimedia Design Occupations*. The Standard Occupational Classification (SOC) System code and occupational titles used in this report from the Bureau of Labor Statistics and O*NET OnLine are shown below.

Web and Digital Interface Designers (SOC 15-1255)

- **Job Description:** Design digital user interfaces or websites. Develop and test layouts, interfaces, functionality, and navigation menus to ensure compatibility and usability across browsers or devices. May use web framework applications as well as client-side code and processes. May evaluate web design following web and accessibility standards, and may analyze web use metrics and optimize websites for marketability and search engine ranking. May design and test interfaces that facilitate the human-computer interaction and maximize the usability of digital devices, websites, and software with a focus on aesthetics and design. May create graphics used in websites and manage website content and links.
- **Knowledge:** N/A
- **Skills:** N/A

Special Effects Artists and Animators (SOC 27-1014)

- **Job Description:** Create special effects or animations using film, video, computers, or other electronic tools and media for use in products, such as computer games, movies, music videos, and commercials.
- **Knowledge:** Computers and Electronics, English Language, Design, Communications and Media, Customer and Personal Service
- **Skills:** Active Listening, Critical Thinking, Reading Comprehension, Speaking, Active Learning

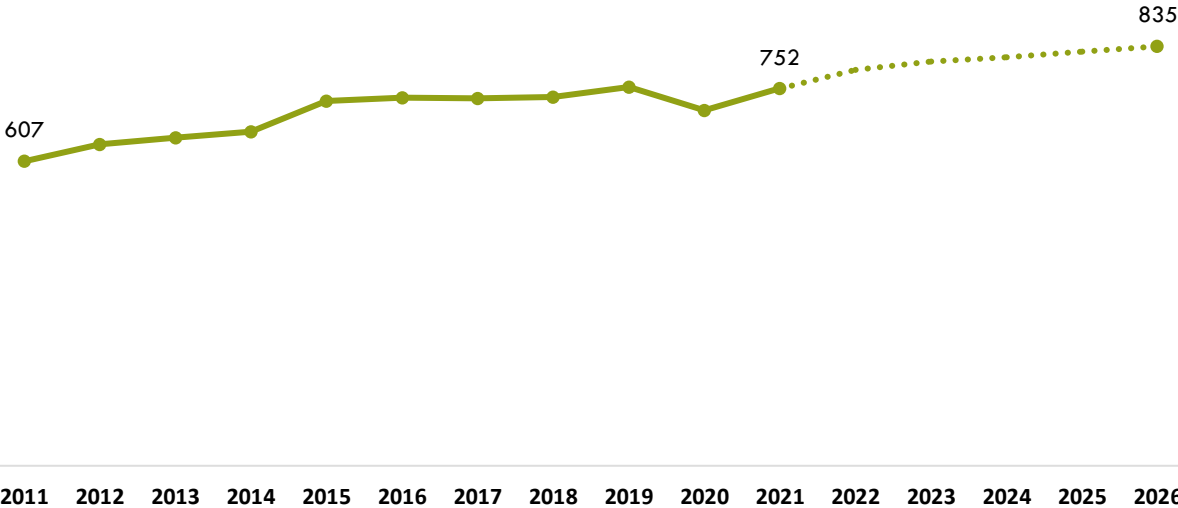
Graphic Designers (SOC 27-1024)

- **Job Description:** 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.
- **Knowledge:** Design, Communications and Media, English Language, Fine Arts, Computers and Electronics
- **Skills:** Active Listening, Critical Thinking, Speaking, Reading Comprehension, Active Learning

Occupational Demand

Exhibit 1a shows trends for *Multimedia Design Occupations* in the SCV/SML subregion. Between 2021 to 2026, the number of jobs for *Multimedia Design Occupations* is projected to increase by 83 jobs, or 11 percent.

Exhibit 1a. Occupational projections for *Multimedia Design Occupations* in the SCV/SML subregion



Between 2021 to 2026, demand for *Multimedia Design Occupations* in the SCV/SML subregion is 91 annual openings (Exhibit 1b). Graphic designers are projected to have the most demand with 64 annual job openings and a projected growth rate of 10 percent.

Exhibit 1b. Occupational projections for *Multimedia Design Occupations* in the SCV/SML subregion

Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
Graphic Designers	554	609	55	10%	64
Web and Digital Interface Designers	115	139	24	21%	16
Special Effects Artists and Animators	83	87	4	5%	11
TOTAL	752	835	83	11%	91

Wages

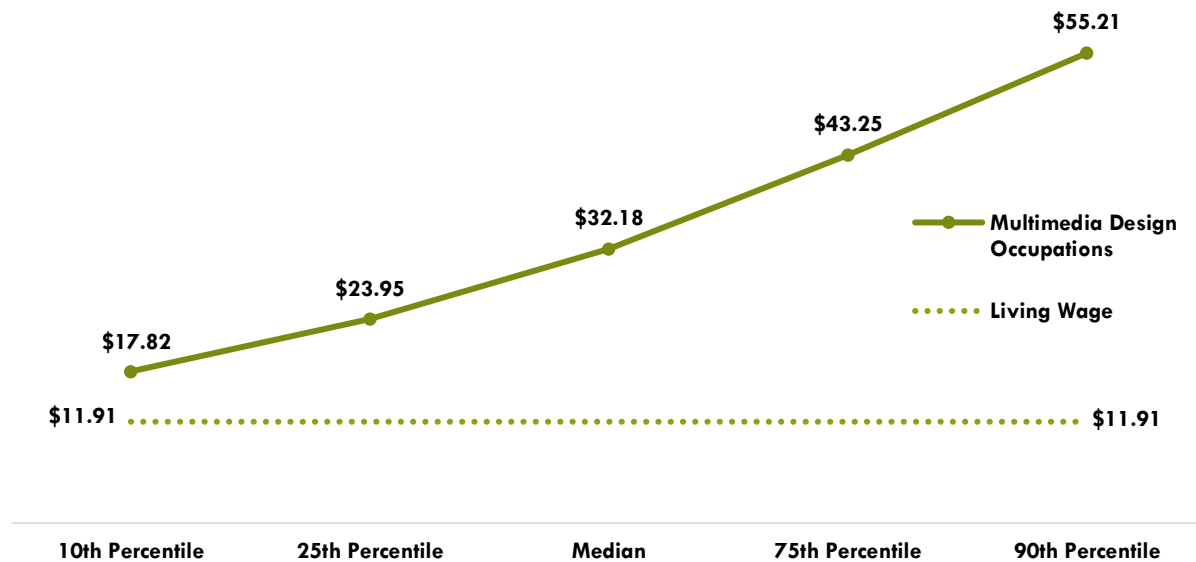
The living wage for a single adult in the SCV/SML subregion is \$11.91/hour.² Exhibit 2a shows the hourly wages of *Multimedia Design Occupations*. Special effects artists and animators earn the highest entry-level wage, \$32.60/hour in the subregion.³ Please note 10th and 25th percentiles are considered entry-level wages while 75th and 90th are considered experienced wages, either gained by long-term employment, extra training, etc.

Exhibit 2a. *Multimedia Design Occupations* hourly wages in the SCV/SML subregion

Occupation	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings
Special Effects Artists and Animators	\$32.60	\$42.23	\$49.86
Web and Digital Interface Designers	\$21.23	\$30.94	\$48.48
Graphic Designers	\$18.03	\$23.37	\$31.42

Exhibit 2b shows the average hourly wages for *Multimedia Design Occupations*; the average entry-level wage is above the living wage for the SCV/SML subregion.

Exhibit 2b. *Multimedia Design Occupations* average hourly wages in the SCV/SML subregion



² The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

³ Entry-level wages are derived from the 25th percentile.

Job Postings

There were 138 job postings for *Multimedia Design Occupations* in the SCV/SML subregion from October 2022 to March 2023.⁴

Top Employers

The top employers with the most job postings are listed in Exhibit 3. The top employers in online job postings were Root Creative Marketing, Fastsigns, and Vineyard Vines.

Exhibit 3. Top employers of *Multimedia Design Occupations* by number of job postings

Employer
Root Creative Marketing
Fastsigns
Vineyard Vines
Editorial Reneuvo
Nexstar Media Group
Disney
California State University
State Center Community College District
Elevance Health
D.V. Kap Home

Top Job Titles

Exhibit 4 shows the most common job titles for *Multimedia Design Occupations* in the SCV/SML subregion. Common job titles in postings include Graphic Designers, Social Media Graphic Designers, and Digital Content Producers.

Exhibit 4. Top job titles in job postings for *Multimedia Design Occupations*

Job Title
Graphic Designers
Social Media Graphic Designers
Digital Content Producers
Designers
Web Designers
Creative Graphic Designers
Visual Graphic Designers
Graphic Illustrators

⁴ Other than occupation titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

Education

Of the 138 job postings, 68 listed a preferred or minimum educational requirement for the position being filled. Among those, 63% requested a bachelor's degree, 25% requested an associate degree, and 12% requested a high school diploma or GED (Exhibit 5).

Exhibit 5. Education levels requested in job postings for *Multimedia Design Occupations*

Education Level	Job Postings	% of Job Postings
Bachelor's degree	43	63%
Associate degree	17	25%
High school or GED	8	12%

Baseline, Specialized, and Software Skills

Exhibit 6 depicts the top baseline, specialized, and software skills in job postings. The most common baseline skills are communications, detail oriented, and presentations. The top specialized skills are graphic design, Adobe Photoshop, and Adobe Illustrator. The top software skill is Adobe Photoshop.

Exhibit 6. In-demand *Multimedia Design Occupations* baseline, specialized, and software skills

Baseline Skills	Specialized Skills	Software Skills
Communications	Graphic Design	Adobe Photoshop
Detail Oriented	Adobe Photoshop	Adobe Illustrator
Presentations	Adobe Illustrator	Adobe Creative Suite
Creativity	Adobe Creative Suite	Adobe InDesign
Self-Motivation	Marketing	Adobe After Effects

Education, Work Experience, & Training

A bachelor's degree is typically required for all three *Multimedia Design Occupations* (Exhibit 7).

Exhibit 7. Education, work experience, training, and Current Population Survey Results for *Multimedia Design Occupations*⁵

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Graphic Designers	Bachelor's degree	None	None	26%
Web and Digital Interface Designers	Bachelor's degree	None	None	24%
Special Effects Artists and Animators	Bachelor's degree	None	None	27%

⁵ "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

Supply

An analysis of program data from the Integrated Postsecondary Education Data System (IPEDS) for the last three program years shows that, on average, six awards were conferred in the CVML subregion (Exhibits 8 and 9).

Exhibit 8. TOP and CIP codes for *Multimedia Design Occupations*

TOP Titles	CIP Titles
0614.10 - Multimedia	10.0304 - Animation, Interactive Technology, Video Graphics and Special Effects

Exhibit 9. Postsecondary supply for *Multimedia Design Occupations*

TOP/CIP Code- Title	College	Associate Degree	Certificate 30 < 60 Semester Units	Total
0614.10 - Multimedia	Bakersfield		5	5
	San Joaquin Delta	1		1
CVML TOTAL		1	5	6

There is an undersupply of 85 Multimedia Design workers in the SCV/SML subregion (Exhibit 10).

Exhibit 10. *Multimedia Design Occupations* workforce demand (annual job openings), postsecondary awards (supply), and additional students needed to fill gap in the SCV/SML subregion



Student Outcomes

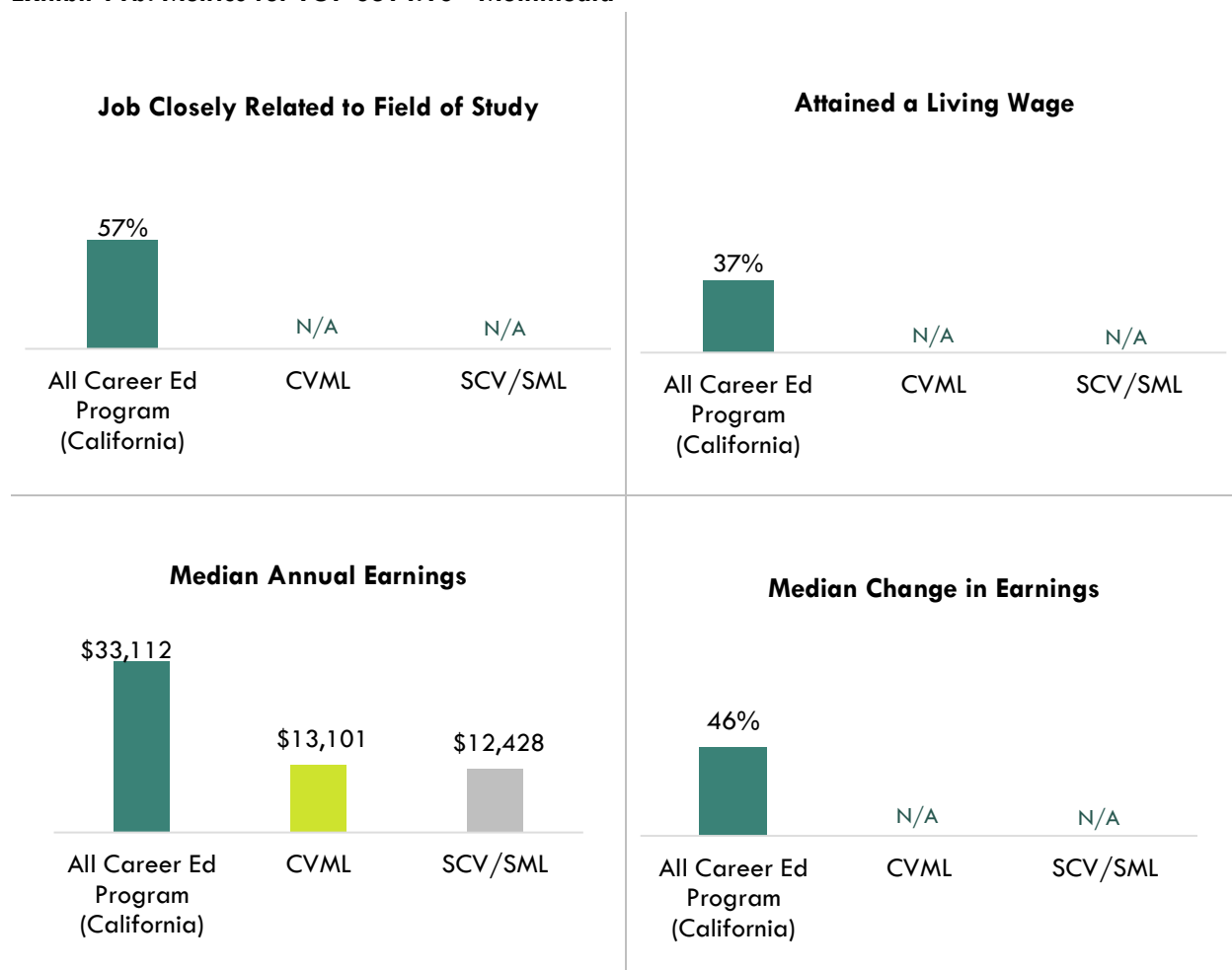
Exhibits 11a – 11b summarize outcomes from California Community College Chancellor’s LaunchBoard for TOP codes related to *Multimedia Design Occupations*. Data was not available for the subregion for students that obtained a job closely related to their field of study or attained a living wage.

Exhibit 11a. Metrics for TOP 0614.10 - Multimedia

Metric	061410 - Multimedia
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	10
Number of Students Who Transferred	*

*denotes data not available in table and charts

Exhibit 11b. Metrics for TOP 0614.10 - Multimedia



Recommendation

This report suggests there is a shortage of 85 *Multimedia Design Occupations* workers in the SCV/SML subregion. Based on these findings, it is recommended that College of the Sequoias work with the regional directors, the college's advisory board, and local industry when discussing the expansion or modification of relevant programs.

Appendix: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor’s Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (LIGHTCAST). LIGHTCAST occupational employment data are based on final LIGHTCAST industry data and final LIGHTCAST staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level LIGHTCAST earnings by industry: economicmodeling.com .
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: https://www.bls.gov/emp/tables/educational-attainment.htm .
LaunchBoard	Chancellor’s LaunchBoard. https://www.calpassplus.org/LaunchBoard/SWP.aspx
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: labormarketinfo.edd.ca.gov .
Job Posting and Skills Data	Lightcast.
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: onetonline.org .

Key Terms and Concepts

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by total job openings.

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (LIGHTCAST) formula that includes historical employment and economic indicators along with national, state and local trends.

LaunchBoard (Attained the Living Wage): Among SWP students who exited college and did not transfer to any postsecondary institution, the proportion who attained the district county living wage for a single adult measured immediately following academic year of exit

LaunchBoard (Median Annual Earnings): Among SWP students who exited the community college system and who did not transfer to any postsecondary institution, median earnings following the academic year of exit.

LaunchBoard (Median Change in Earnings): Among SWP students who exited and who did not transfer to any postsecondary institution, median change in earnings between the second quarter prior to the beginning of the academic year of entry and the second quarter after the end of the academic year of exit from the last college attended.

LaunchBoard (Job Closely Related to Field of Study): Among SWP students who responded to the CTE Outcomes Survey and did not transfer to any postsecondary institution, the proportion who reported that they are working in a job very closely or closely related to their field of study.

Living Wage: The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.