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Labor Market Analysis

Graphic 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 Taft College to determine whether there is demand in the local labor market that is not being met by the supply from postsecondary programs. This report summarizes labor market demand, wages, skills, and postsecondary supply for *Graphic Design*, which includes:

- 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** — Occupations related to *Graphic Design* have a labor market demand of 100 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 71 annual job openings and are projected to grow by 13%.
- **Wages** — Average entry-level earnings of \$23.96/hour for occupations related to *Graphic Design* 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, \$32.58/hour.
- **Employers and Occupational Titles** — Employers in the SCV/SML subregion include VirtualVocations, Archer & Hound Advertising, and Fastsigns. The most common occupational and job title in job postings in the subregion is graphic designers.
- **Skills and Certifications** — The top baseline, specialized, and software skill is Adobe Illustrator. The most in-demand certification is a DOT Certification.
- **Education** — A bachelor's degree is typically required for occupations related to *Graphic Design*.
- **Supply and Demand Analysis** — Based on 100 annual openings (i.e., demand) and 13 postsecondary degrees awarded (i.e., supply), an analysis of supply and demand suggests there is an undersupply of 87 workers in the SCV/SML subregion. In the CVML region, 47 awards were conferred suggesting an undersupply of 123 workers.

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 Taft College work with the regional directors, the college's advisory board, and local industry in the development of programs to address the shortage of *Graphic Design* workers.

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 Taft College with labor market information for *Graphic 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 *Graphic Design* is included in the report. The Standard Occupational Classification (SOC) System codes 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

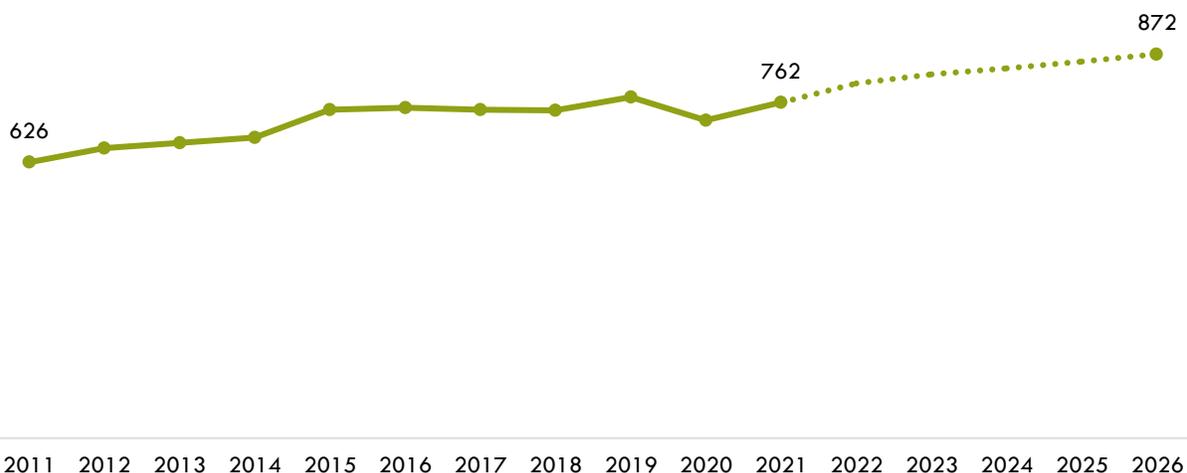
Graphic Designers (SOC 27-1024)

- **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

Employment

Exhibit 1a shows trends for *Graphic Design* in the SCV/SML subregion. Between 2011 to 2026, the number of jobs for occupations related to *Graphic Design* is projected to increase by 110, growing by 14%.

Exhibit 1a. Historical employment and projected occupational demand for occupations related to *Graphic Design* in the SCV/SML subregion, 2011-2026



Occupations related to *Graphic Design* in the SCV/SML subregion employed 762 workers in 2021 (Exhibit 1b). *Graphic designers* are projected to increase by 13% over the next five years and have projected annual openings of 71.

Exhibit 1b. Current employment and projected occupational demand for occupations related to *Graphic Design* in the SCV/SML subregion, 2021-2026

Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
Graphic Designers	564	640	76	13%	71
Web and Digital Interface Designers	115	149	34	30%	18
Special Effects Artists and Animators	83	83	0	0%	11
TOTAL	762	872	110	14%	100

Wages

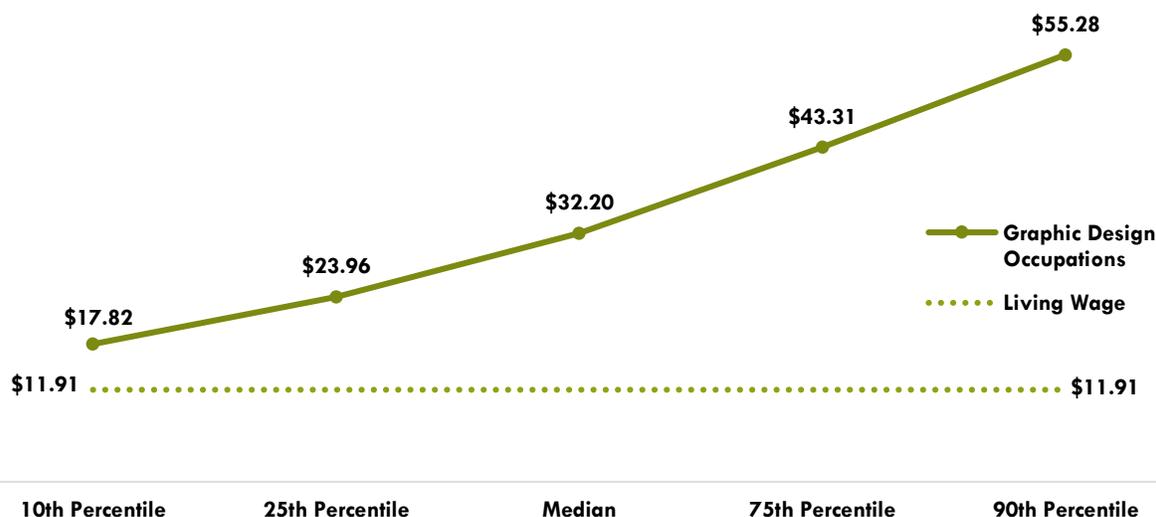
The average living wage for a single adult in the SCV/SML subregion is \$11.91/hour.² Exhibit 2a shows the entry-hourly wages for special effects artists and animators, an occupation related to *Graphic Design*, which has an entry-level wage of \$32.58/hour.³

Exhibit 2a. Hourly wages for occupations related to *Graphic Design* in the SCV/SML subregion

Occupation	25 th Percentile Hourly Earnings	Median Hourly Earnings	75 th Percentile Hourly Earnings
Special Effects Artists and Animators	\$32.58	\$42.23	\$49.86
Web and Digital Interface Designers	\$21.24	\$30.95	\$48.51
Graphic Designers	\$18.06	\$23.42	\$31.56

Exhibit 2b shows the average hourly wages for *Graphic Design* occupations; the average entry-level wage is more than the living wage for the SCV/SML subregion.

Exhibit 2b. Average hourly wages for occupations related to *Graphic Design* 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 Note: 10th and 25th percentiles are considered entry-level wages while 75th and 90th are considered experienced wages, which may be obtained through long-term employment or extra training, etc.

Job Postings

There were 98 job postings for occupations related to *Graphic Design* in the SCV/SML subregion from November 2022 to April 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 VirtualVocations, Archer & Hound Advertising, and Fastsigns Fastsigns.

Exhibit 3. Top employers of *Graphic Design* in job postings

Employer
VirtualVocations
Archer & Hound Advertising
Fastsigns Fastsigns
Closets by Design
GAF Materials Corporation
Valley Health Team
Nexstar Media Group
Disney
ProYouth
Root Creative Marketing

Top Occupational Titles

Exhibit 4 shows the O*NET OnLine occupational titles for *Graphic Design* in the SCV/SML subregion. Common job titles in postings include: Rotor Graphic Designers, Social Media Graphic Designers, and Sales/Design Consultants.

Exhibit 4. Top occupational titles in job postings for *Graphic Design*

Occupational Title
Graphic Designers
Video Game Designers
Special Effects Artists and Animators

⁴ Other than occupational 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.

Salaries

Exhibit 5 shows the “Market Salaries” for *Graphic Design*. These are calculated by Lightcast using a machine learning model built from millions of job postings every year. This accounts for adjustments based on location, industry, skills, experience, education, among other variables.

Exhibit 5. Market salaries for *Graphic Design*

Market Salary	Job Postings
\$35,000-\$39,999	16
\$75,000-\$156,000	9
\$40,000-\$44,999	8
\$65,000-\$69,999	8
\$55,000-\$59,999	7

Education

Of the 98 unique job postings, 57 listed a preferred or minimum educational requirement for the position being filled. Among those, 68% requested a bachelor’s degree, 16% requested an associate degree, and 9% requested a high school diploma or GED (Exhibit 6).

Exhibit 6. Education levels requested in job postings for *Graphic Design*

Education Level	Job Postings	% of Job Postings
Bachelor’s degree	39	68%
Associate degree	9	16%
High school or GED	5	9%
Master’s degree	3	5%
Ph.D. or professional degree	1	2%

Baseline, Specialized, and Software Skills

Exhibit 7 depicts the top baseline, specialized, and software skills in job postings. The most important baseline, specialized, and software skill is Adobe Illustrator.

Exhibit 7. In-demand baseline, specialized, and software skills for *Graphic Design* in job postings

Baseline Skills	Specialized Skills	Software Skills
Adobe Illustrator	Adobe Illustrator	Adobe Illustrator
Adobe Photoshop	Federal Aviation Administration	Adobe Photoshop
Graphic Design	Rotorcraft	Adobe Creative Suite
Marketing	PIC Microcontrollers	Adobe InDesign
Adobe Creative Suite	Turbines	HyperText Markup Language (HTML)

Certifications

Of the 98 job postings, there were 4 certifications listed. Among those, 25% indicated a need for a No Child Left Behind Act (NCLB) Standards Certification. The next top certification is a Security Clearance (Exhibit 8).

Exhibit 8. Top *Graphic Design* certifications requested in job postings

Certifications	% of Job Postings
No Child Left Behind Act (NCLB) Standards	25%
Security Clearance	25%

Education, Work Experience, & Training

A bachelor's degree is typically required for occupations related to *Graphic Design* (Exhibit 9).

Exhibit 9. Education, work experience, training, and Current Population Survey results for occupations related to *Graphic Design*⁵

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Graphic Designers	Bachelor's degree	None	None	26.5%
Web and Digital Interface Designers	Bachelor's degree	None	None	23.4%
Special Effects Artists and Animators	Bachelor's degree	None	None	27.7%

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, 33 awards were conferred in the SCV/SML subregion (Exhibits 10 and 11).

Exhibit 10. TOP and CIP codes for *Graphic Design*

TOP Titles	CIP Titles
103000 - Graphic Art and Design	50.0409 - Graphic Design
	11.9999 - Computer and Information Sciences and Support Services, Other
	09.0702 - Digital Communication and Media/Multimedia
061400 - Digital Media	10.0303 - Prepress/Desktop Publishing and Digital Imaging Design
	50.0102 - Digital Arts
	10.0304 - Animation, Interactive Technology, Video Graphics and Special Effects
061420 - Electronic Game Design	50.0411 - Game and Interactive Media Design
061430 - Website Design and Development	11.0801 - Web Page, Digital/Multimedia and Information Resources Design
061440 - Animation	10.0304 - Animation, Interactive Technology, Video Graphics and Special Effects
	110803 - Computer Graphics
061460 - Computer Graphics and Digital Imagery	110899 - Computer Software and Media Applications, Other

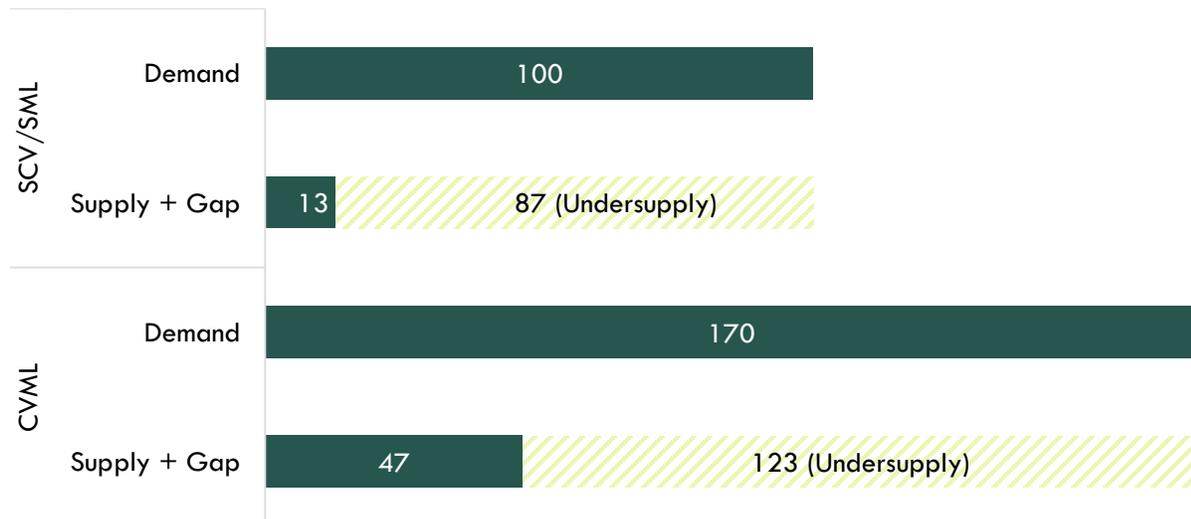
Exhibit 11. Postsecondary supply for *Graphic Design*

TOP/ CIP Code- Title	College	2019-2020	2020-2021	2021-2022	3- Year Average
103000 - <i>Graphic Art and Design</i>	Cerro Coso	-	2	5	2*
	Columbia	3	4	3	3
	Merced	1	-	2	1
061430 - <i>Website Design and Development</i>	Bakersfield	1	1	-	1*
	Cerro Coso	13	3	10	9*
	Clovis	1	2	-	1*
	Fresno City	1	-	-	0
061460 - <i>Computer Graphics and Digital Imagery</i>	Modesto Junior	27	28	33	29
SCV/SML TOTAL		16	8	15	13
CVML TOTAL		47	40	53	47

*SCV/SML awards

There is an undersupply of 87 *Graphic Design* workers in the SCV/SML subregion and an undersupply of 123 workers in the region (Exhibit 12).

Exhibit 12. *Graphic Design* workforce demand (annual job openings), postsecondary awards (supply), and additional students needed to fill gap in the SCV/SML subregion and region



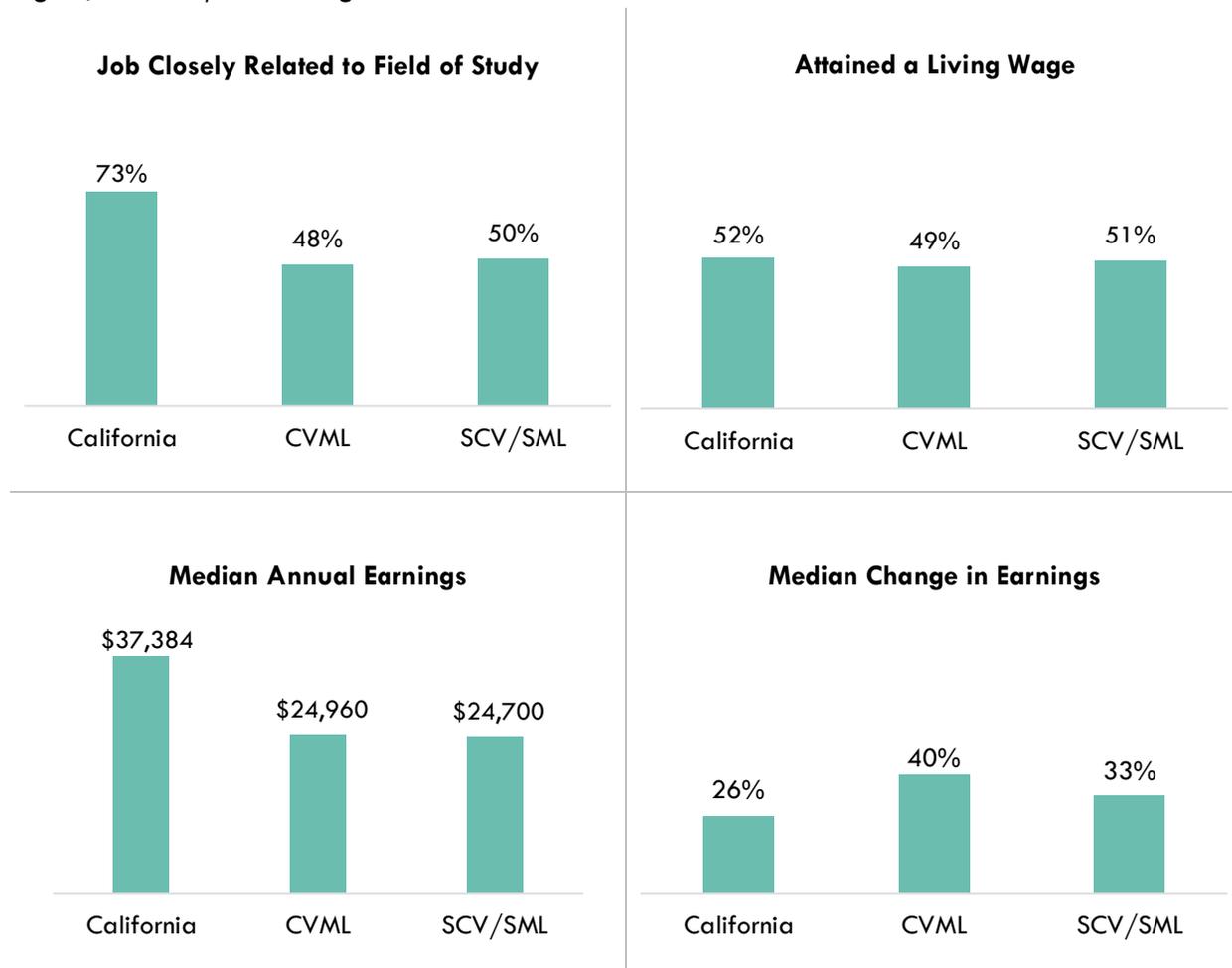
Student Outcomes

Exhibits 11a-11b summarize outcomes from California Community College Chancellor’s LaunchBoard for TOP codes related to *Graphic Design*. Notably, 50% of students obtained a job closely related to their field of study in the subregion and 51% attained a living wage in the subregion.

Exhibit 11a. LaunchBoard Metrics for TOP 103000 - Graphic Art and Design in the subregion

Metric	
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	20
Number of Students Who Transferred	56

Exhibit 11b. LaunchBoard Metrics for TOP 103000 - Graphic Art and Design in California, CVML region, and SCV/SML subregion



Recommendation

This report suggests there is a shortage of 87 workers in the SCV/SML subregion and a shortage of 123 workers in the CVML region for *Graphic Design*. Based on these findings, it is recommended that Taft College work with the regional directors, the college's advisory board, and local industry in the development of programs to address the shortage of *Graphic Design* workers in the region.

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	Burning Glass: burning-glass.com/ .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 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.