

September 2021

Labor Market Analysis

Culinary Arts

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Colleges



Prepared by the Central Valley/Mother Lode Center of Excellence

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COVID-19 Statement: This report includes employment projection data by Emsi. Emsi'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.

If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version. To make a request, contact Nora Seronello by phone at (209) 575-6894 or by email seronellon@mjc.edu.

Summary

Please note the COVID-19 statement on page 2 when considering this report's findings.

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for culinary arts. Seven occupations related to culinary arts were identified for Porterville College:

- 35-2014, Cooks, Restaurant
- 35-1012, First-Line Supervisors of Food Preparation and Serving Workers
- 35-2012, Cooks, Institution and Cafeteria
- 11-9051, Food Service Managers
- 35-1011, Chefs and Head Cooks
- 35-2019, Cooks, All Other
- 35-2013, Cooks, Private Household

Key findings:

- **Occupational demand** — Nearly 14,900 workers were employed in jobs related to culinary arts in 2020 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. The largest occupation is cooks, restaurant with 5,529 workers in 2020, a projected growth rate of 11% over the next five years, and 870 annual openings.
- **Wages** — Food service managers earn the highest entry-level wage, \$15.95/hour in the subregion.
- **Employers** — Employers with the most job postings in the subregion are Starbucks Coffee Company, Taco Bell, and Raising Cane's.
- **Occupational titles** — The most common occupational title in job postings in the subregion is food service managers. The most common job title is cook.
- **Skills and certifications** — The top baseline skill is communication, the top specialized skill is cooking, and the top software skill is Microsoft Excel. The most in-demand certification is a driver's license.
- **Education** — Either no formal education or a high school diploma are typically required for six of the seven occupations. A postsecondary nondegree award is typically required for cooks, private household.
- **Supply** — Analysis of postsecondary completions in the region shows that on average 181 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 1,027 trained workers in the subregion and 1,638 workers in the region. The Center of Excellence recommends that Porterville College work with the regional directors, the college's advisory board, and local industry in the expansion of programs to address the shortage of culinary arts workers in the region.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Porterville College to provide labor market information for culinary arts. 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. The average living wage for a single adult in the SCV/SML subregion is \$11.91/hour.¹ Analysis of the program and occupational data related to culinary arts resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 35-2014, Cooks, Restaurant
- 35-1012, First-Line Supervisors of Food Preparation and Serving Workers
- 35-2012, Cooks, Institution and Cafeteria
- 11-9051, Food Service Managers
- 35-1011, Chefs and Head Cooks
- 35-2019, Cooks, All Other
- 35-2013, Cooks, Private Household

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown below. O*NET data was not available for Cooks, All Other.

Cooks, Restaurant

Job Description: Prepare, season, and cook dishes such as soups, meats, vegetables, or desserts in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.

Knowledge: Food Production, Customer and Personal Service, English Language, Production and Processing

Skills: Monitoring, Active Listening, Coordination, Critical Thinking, Speaking

First-Line Supervisors of Food Preparation and Serving Workers

Job Description: Directly supervise and coordinate activities of workers engaged in preparing and serving food.

Knowledge: Customer and Personal Service, Food Production, Production and Processing, Administration and Management, English Language

Skills: Coordination, Monitoring, Speaking, Active Listening, Service Orientation

Cooks, Institution and Cafeteria

Job Description: Prepare and cook large quantities of food for institutions, such as schools, hospitals, or cafeterias.

Knowledge: English Language, Food Production, Customer and Personal Service, Mathematics, Administration and Management

Skills: Judgement and Decision Making, Monitoring, Operations Monitoring, Quality Control Analysis, Service Orientation

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/>.

Food Service Managers

Job Description: Plan, direct, or coordinate activities of an organization or department that serves food and beverages.

Knowledge: Customer and Personal Service, Administration and Management, English Language, Personnel and Human Resources, Education and Training

Skills: Service Orientation, Active Listening, Management of Personnel Resources, Monitoring, Speaking

Chefs and Head Cooks

Job Description: Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.

Knowledge: Food Production, Customer and Personal Service, Administration and Management, Production and Processing, Personnel and Human Resources

Skills: Coordination, Monitoring, Speaking, Time Management, Active Listening

Cooks, Private Household

Job Description: Prepare meals in private homes. Includes personal chefs.

Knowledge: Customer and Personal Service, Food Production, Sales and Marketing, Administration and Management, English Language

Skills: Critical Thinking, Service Orientation, Management and Material Resources, Active Learning, Active Listening

Occupational Demand

The South Central Valley/Southern Mother Lode subregion employed 14,888 workers in culinary arts occupations in 2020 (Exhibit 1). The largest occupation is cooks, restaurant with 5,529 workers in 2020. This occupation is projected to grow by 11% over the next five years and has the greatest number of projected annual openings, 870.

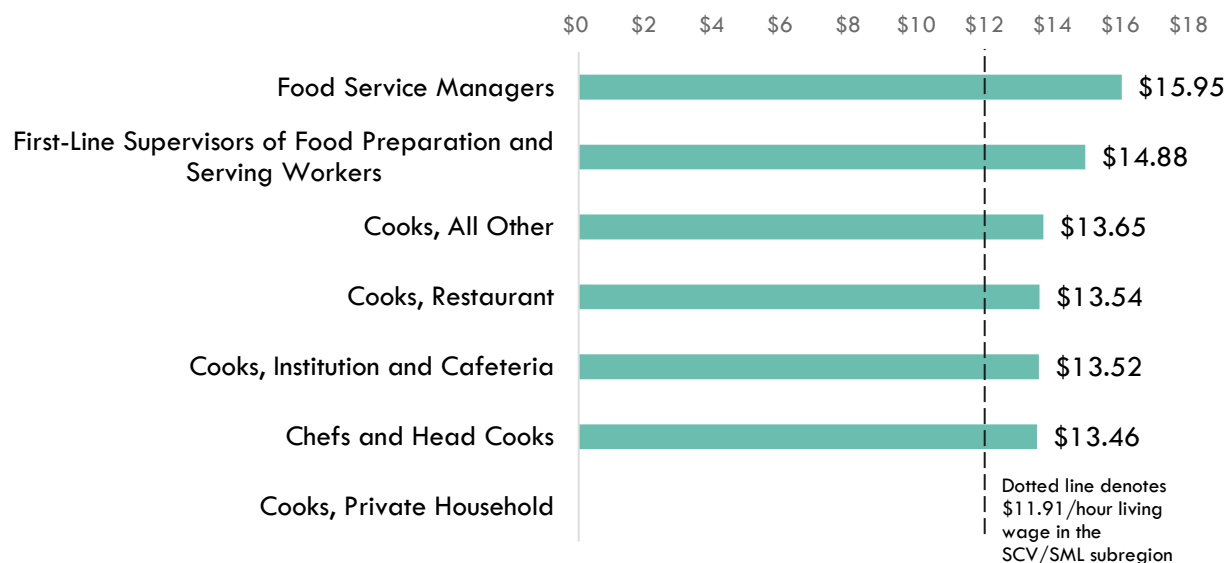
Exhibit 1. Culinary arts employment and occupational projections in the SCV/SML subregion

Occupation	2020 Jobs	2025 Jobs	5-Year Change	5-Year % Change	Annual Openings
Cooks, Restaurant	5,529	6,149	620	11%	870
First-Line Supervisors of Food Preparation and Serving Workers	4,793	5,340	547	11%	803
Cooks, Institution and Cafeteria	1,662	1,829	167	10%	258
Food Service Managers	1,996	2,068	73	4%	222
Chefs and Head Cooks	826	869	42	5%	105
Cooks, All Other	81	87	6	8%	12
Cooks, Private Household	<10	<10	Insf. Data	Insf. Data	0
TOTAL	14,888	16,344	1,456	10%	2,270

Wages

Exhibit 2 shows the entry-level hourly wages of the culinary arts occupations. Food service managers earn the highest entry-level wage, \$15.95/hour in the subregion. Entry-level wages are derived from the 25th percentile. Wage data for cooks, private household was unavailable.

Exhibit 2. Culinary arts entry-level wages in the SCV/SML subregion



Job Postings

There were 3,188 job postings for the seven occupations in the SCV/SML subregion from March 2021 to August 2021.² The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of culinary arts occupations by number of job postings

Employer	Job Postings	% Job Postings
Starbucks Coffee Company	198	7%
Taco Bell	115	4%
Raising Cane's	81	3%
Chili's	61	2%
Burger King	59	2%
Jack in the Box	54	2%
TravelCenters of America	44	2%
Buffalo Wild Wings	39	1%
Pizza Hut	38	1%
QSR West, Inc	37	1%

² 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.

Exhibit 4 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across five O*NET OnLine occupations. The occupational title food service managers is listed in 1,259 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include Cook in 193 job postings, Assistant Manager in 192 job postings, and General Manager in 159 job postings.

Exhibit 4. Top occupational titles in job postings for culinary arts occupations

Occupational Title	Job Postings	% of Job Postings
Food Service Managers	1,259	39%
Cooks, Restaurant	945	30%
First-Line Supervisors of Food Preparation and Serving Workers	855	27%
Chefs and Head Cooks	121	4%
Cooks, Institution and Cafeteria	8	0%

Salaries

Exhibit 5 shows the “Market Salaries” for culinary arts occupations that are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

Exhibit 5. Salaries for culinary arts occupations

Market Salary Percentile	Salary Amount
10th Percentile	\$22,878
25th Percentile	\$24,780
50th Percentile	\$28,925
75th Percentile	\$35,844
90th Percentile	\$46,030

Education

Of the 3,188 job postings, 1,390 listed an education level preferred for the positions being filled. Of those, 89% requested high school or vocational training, 21% requested a bachelor's degree, and 20% requested an associate degree (Exhibit 6). A job posting can indicate more than one education level. Hence, the percentages shown in the chart below may total more than 100%.

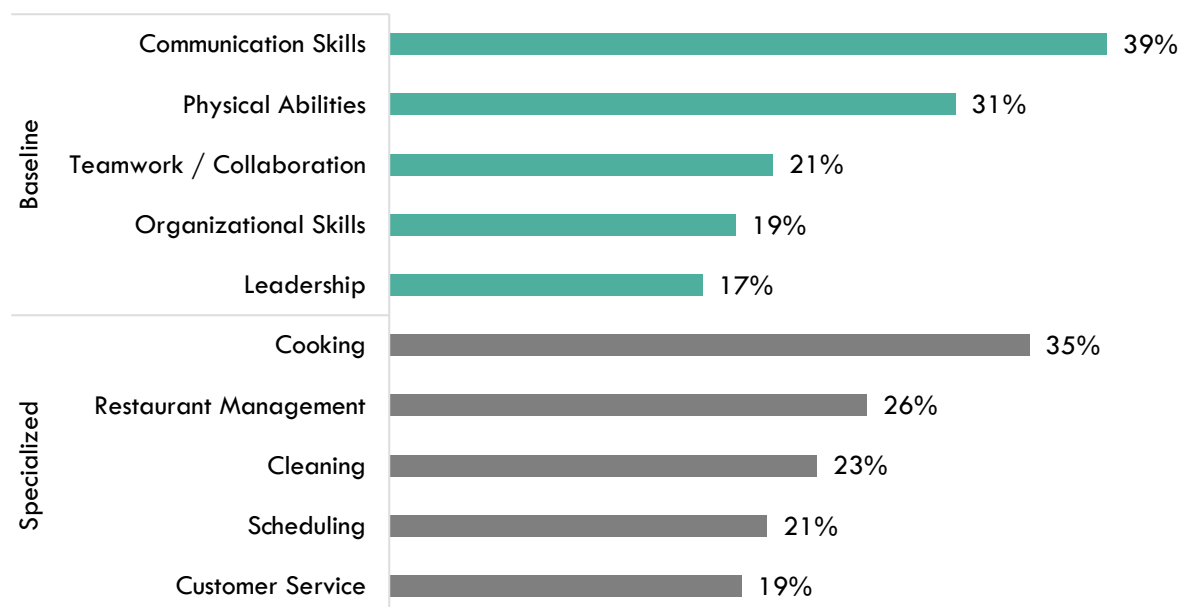
Exhibit 6. Education levels requested in job postings for culinary arts occupations

Education Level	Job Postings	% of Job Postings
High school or vocational training	1,238	89%
Bachelor's degree	289	21%
Associate degree	279	20%
Master's degree	17	1%
Doctoral degree	1	0%

Baseline and Specialized Skills

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are communication, 39% of job postings, physical abilities, 31%, and teamwork/collaboration, 21%. The top three specialized skills are cooking, 35% of job postings, restaurant management, 26%, and cleaning, 23%.

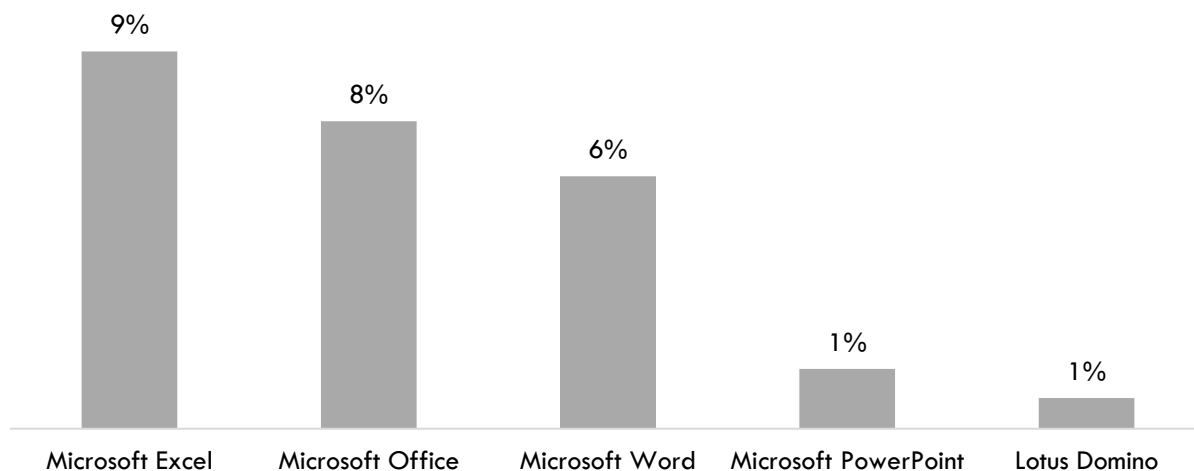
Exhibit 7. In-demand culinary arts baseline and specialized skills



Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Excel and Office were the top two software skills identified in job postings (Exhibit 8).

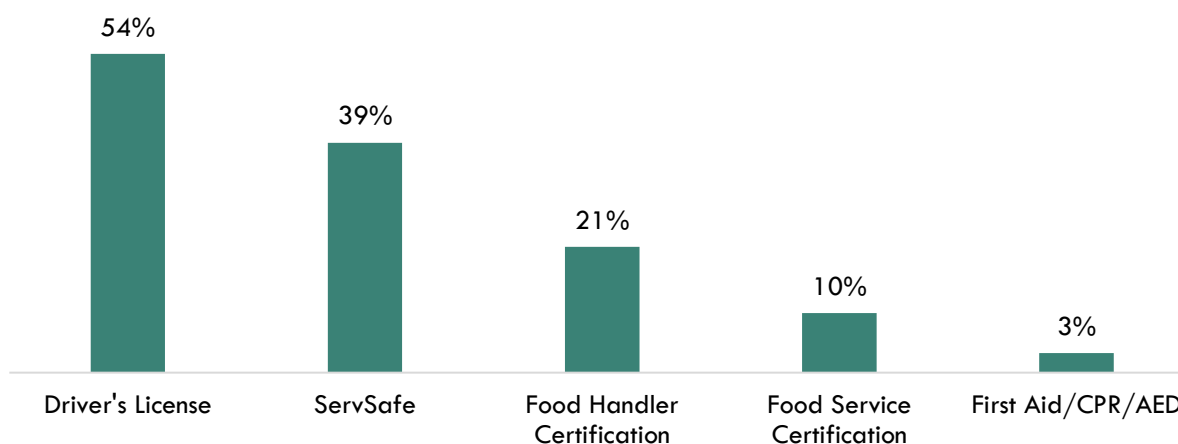
Exhibit 8. In-demand culinary arts software skills



Certifications

Of the 3,188 job postings, 124 contained certification data. Among those, 54% indicated a need for a driver's license. The next top certifications are ServSafe and Food Handler Certification (Exhibit 9). (Due to the low number of job postings with certifications listed, the chart below may not be representative of the full sample.)

Exhibit 9. Top culinary arts certifications requested in job postings



Education, Work Experience & Training

Either no formal education or a high school diploma are typically required for six of the seven occupations (Exhibit 10). A postsecondary nondegree award is typically required for cooks, private household.

Exhibit 10. Education, work experience, training, and Current Population Survey results for culinary arts occupations³

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Cooks, Restaurant	No formal educational credential	Less than 5 years	Moderate-term	24.3%
First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	Less than 5 years	None	36.7%
Cooks, Institution and Cafeteria	No formal educational credential	None	Short-term	24.3%
Food Service Managers	High school diploma or equivalent	Less than 5 years	None	35.8%
Chefs and Head Cooks	High school diploma or equivalent	5 years or more	None	35.8%
Cooks, All Other	No formal educational credential	None	Moderate-term	24.3%
Cooks, Private Household	Postsecondary nondegree award	Less than 5 years	None	24.3%

³ "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

Supply

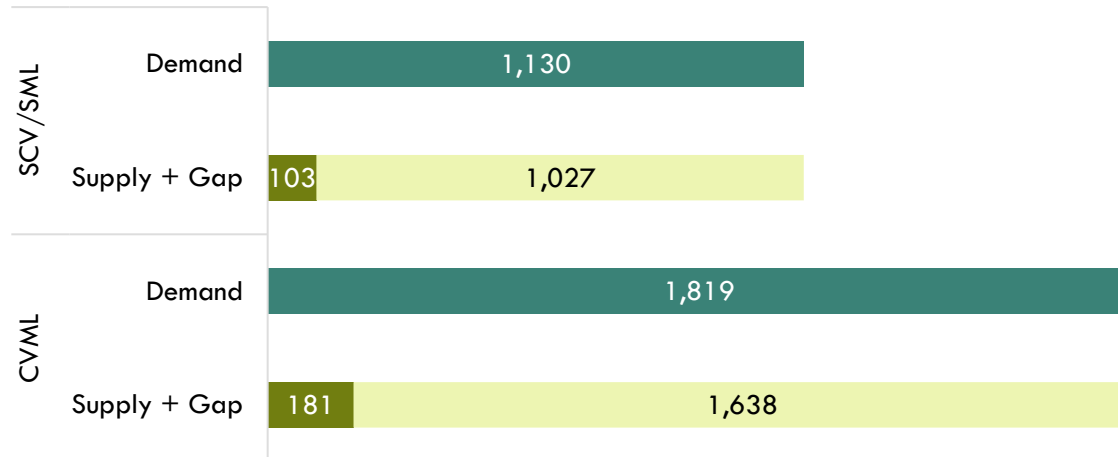
Analysis of program data from the California Community Colleges Chancellor's Office Data Mart included the TOP and CIP codes and titles: 130630 - Culinary Arts and 12.0503 - Culinary Arts/Chef Training. Analysis of the last three years of data shows that, on average, 181 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

Exhibit 11. Postsecondary supply for culinary arts occupations in the region

TOP or CIP Code-Title	College	Associate Degree	Award < 1 Academic Year	Award 1 < 2 Academic Years	Certificate 16 < 30 Semester Units	Certificate 18 < 30 Semester Units	Certificate 30 < 60 Semester Units	Certificate 6 < 18 Semester Units	Subtotal
130630 - Culinary Arts	Bakersfield	17					7		24
	Columbia	6			1	3	5	0	15
	Merced	5			2	4			11
	Modesto	1							1
	San Joaquin Delta	26				17	9		51
	Sequoias				1	2		5	7
12.0503 - Culinary Arts/Chef Training	Institute of Technology	49	13	9					71
TOTAL		104	13	9	4	25	21	5	181

There is an undersupply of 1,027 culinary arts workers in the SCV/SML subregion and 1,638 workers in the region (Exhibit 12).

Exhibit 12. Culinary arts workforce demand (annual job openings), postsecondary supply of students (awards), and additional students needed to close the gap in the SCV/SML subregion and region



Student Outcomes

Exhibit 13 summarizes employment and wage outcomes from the California Community College Chancellor's Cal-PASS Plus LaunchBoard for the TOP code related to culinary arts. Of note, there were 72 culinary arts students who received a degree or certificate or attained apprenticeship journey status; 18 students transferred; 40% of students obtained a job closely related to their field of study; 33% reported a median change in earnings; and 38% attained a living wage.

Exhibit 13. Regional metrics for the TOP code related to culinary arts

Metric	Culinary Arts 130630
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	72
Number of Students Who Transferred	18
Job Closely Related to Field of Study	40%
Median Change in Earnings	33%
Attained a Living Wage	38%
* denotes data not available.	

Conclusion

The entry-level wages of the seven occupations exceed the SCV/SML subregion's average living wage. There were 3,188 job postings in the past six months for occupations related to culinary arts in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is communication, and the top specialized skill is cooking.
- The top software skill is Microsoft Excel.
- The top certification is a driver's license.

There is an undersupply of trained workers, a shortage of 1,027 in the SCV/SML subregion and 1,638 in the region.

Recommendation

Based on these findings, it is recommended that Porterville College work with the regional directors, the college's advisory board, and local industry in the expansion of programs to address the shortage of culinary arts in the region.

Appendix A: 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. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI 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 EMSI 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 .
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 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. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

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.