August 2022

Labor Market

Analysis

Culinary Arts

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CENTERS OF EXCELLENCE
Inform Connect Advance

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California Community Colleges

Prepared by the Central Valley/Mother Lode Center of Excellence

Table of Contents

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

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. Two occupations related to Culinary Arts were identified for Madera College:
- 35-1011, Chefs and Head Cooks
- 35-1012, First-Line Supervisors of Food Preparation and Serving Workers

Key findings:
- **Occupational demand —** Nearly 6,115 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 first-line supervisors of food preparation and serving workers with 5,287 workers, a projected growth rate of 52% over the next five years, and 1,572 annual openings.

- **Wages —** Chefs and head cooks earn the highest entry-level wage, $17.71/hour in the subregion.

- **Employers —** Employers with the most job postings in the subregion are Starbucks Coffee Company, Americorps Nccc, and Taco Bell.

- **Occupational titles —** The most common occupational title in job postings in the subregion is First-Line Supervisors of Food Preparation and Serving Workers. The most common job title is Shift Leader.

- **Skills and certifications —** The top baseline skill is communication skills, the top specialized skill is customer service, and the top software skill is Microsoft Excel. The most in-demand certification is a ServSafe.

- **Education —** A high school diploma or equivalent is typically required for the first-line supervisors of food preparation and serving workers, food service managers, and chefs and head cooks.

- **Supply —** Analysis of postsecondary completions shows that on average 110 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 1,727 trained workers in the subregion and 2,703 workers in the region. The Center of Excellence recommends that Madera College work with the regional directors, the college's advisory board, and local industry in the development 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 Madera 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:

- 35-1011, Chefs and Head Cooks
- 35-1012, First-Line Supervisors of Food Preparation and Serving Workers

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.

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

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

Occupational Demand

The SCV/SML subregion employed 6,104 workers in Culinary Arts occupations in 2020 (Exhibit 1). The largest occupation is first-line supervisors of food preparation and serving workers with 5,287 workers in 2020. This occupation is projected to grow by 52% over the next five years and has the greatest number of projected annual openings, 1,572.

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

Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
First-Line Supervisors of Food Preparation and Serving Workers	5,287	8,026	2,739	52%	1,572
Chefs and Head Cooks	818	1,171	353	43%	213
TOTAL	**6,104**	**9,197**	**3,093**	**51%**	**1,785**

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[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://insightcced.org/tools-metrics/self-sufficiency-standard-tool-for-california/.

Wages

Exhibit 2 shows the entry-level hourly wages of the Culinary Arts occupations. Chefs and head cooks earn the highest entry-level wage, $17.71/hour in the subregion[2].

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

Dotted line denotes $11.91/hour living wage in the SCV/SML subregion
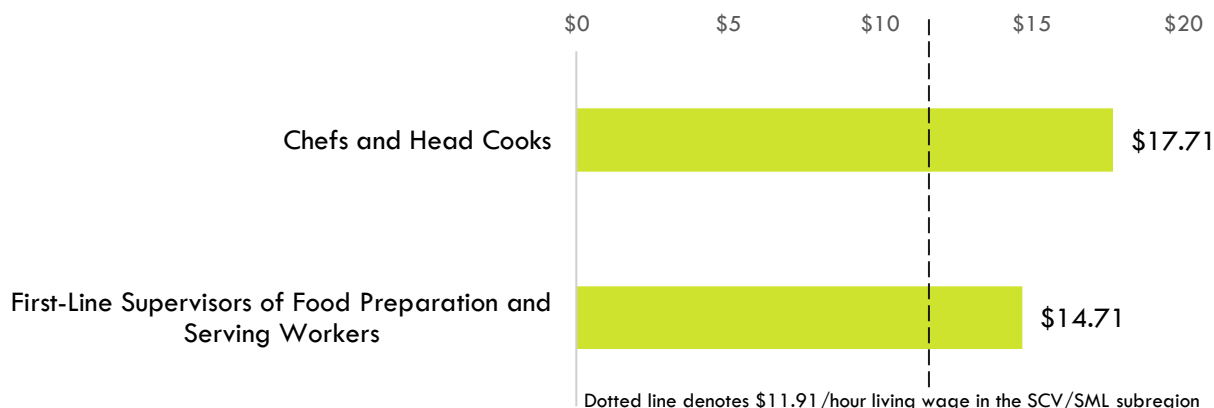
Job Postings

There were 1,231 job postings for the four occupations in the SCV/SML subregion from February 2022 to July 2022.[3] The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of Culinary Arts by number of job postings

Employer	Job Postings	% Job Postings
Starbucks Coffee Company	207	8%
Americorps Nccc	82	3%
Taco Bell	79	3%
Target	45	2%
Jack	27	1%
Panda Express	23	1%
Pilot Flying J	21	1%
Delaware North Company	20	1%
Compass Group North America	19	1%
Wingstop	17	1%

Exhibit 4 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across two O*NET OnLine occupations. The occupational title First-Line Supervisors of Food Preparation and Serving Workers is listed in 1,112 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include Shift Leader in 127 job postings, Team Leader in 67 job postings, and Shift Lead in 57 job postings.

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[2] Entry-level wages are derived from the 25th percentile.

[3] 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. Top occupational titles in job postings for Culinary Arts

Occupational Title	Job Postings	% of Job Postings
First-Line Supervisors of Food Preparation and Serving Workers	1,112	90%
Chefs and Head Cooks	119	10%

Salaries

Exhibit 5 shows the "Market Salaries" for Culinary Arts occupations. These are calculated by Burning Glass using a machine learning model built off of millions of job postings every year. This 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	$24,238
25th Percentile	$26,218
50th Percentile	$29,325
75th Percentile	$35,705
90th Percentile	$49,110

Education

Of the 1,231 job postings, 379 listed an education level preferred for the positions being filled. Among those, 84% requested high school or vocational training, 23% requested a bachelor's degree, and 10% 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%.
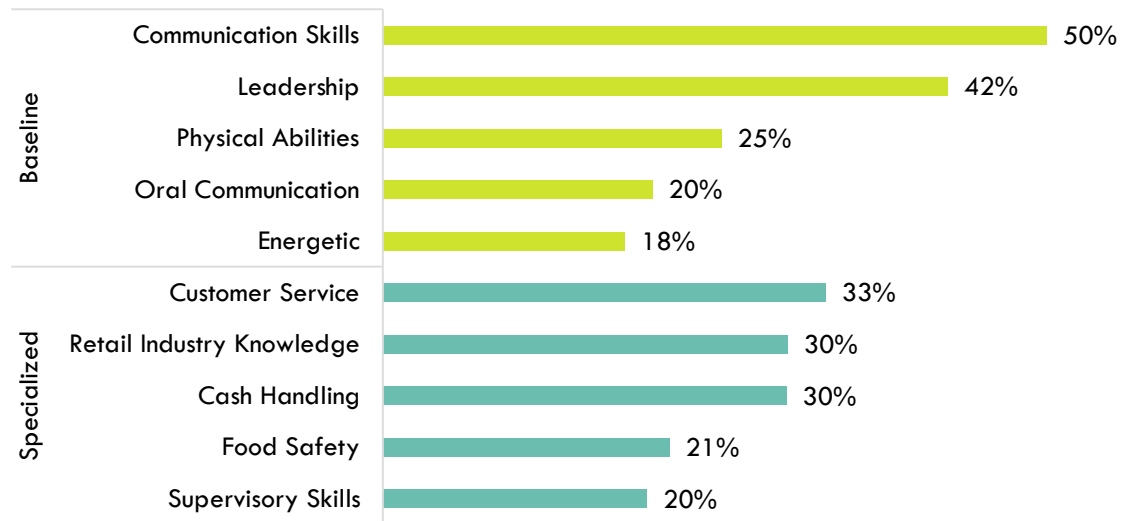
Exhibit 6. Education levels requested in job postings for Culinary Arts

Education Level	Job Postings	% of Job Postings
High school or vocational training	317	84%
Bachelor's degree	86	23%
Associate's degree	38	10%
Master's degree	8	2%

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 skills, 50% of job postings, leadership, 42%, and physical abilities, 25%. The top three specialized skills are customer service, 33% of job postings, retail industry knowledge, 30%, and cash handling, 30%.

Exhibit 7. In-demand Culinary Arts baseline and specialized skills

Baseline
- Communication Skills — 50%
- Leadership — 42%
- Physical Abilities — 25%
- Oral Communication — 20%
- Energetic — 18%

Specialized
- Customer Service — 33%
- Retail Industry Knowledge — 30%
- Cash Handling — 30%
- Food Safety — 21%
- Supervisory Skills — 20%

Software Skills

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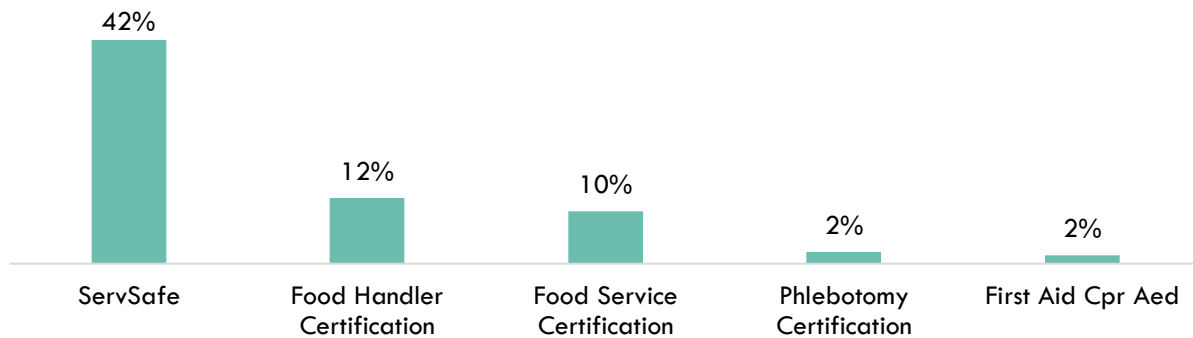
Exhibit 8. In-demand Culinary Arts software skills

- Microsoft Excel — 5%
- Microsoft Word — 4%
- Microsoft Office — 3%
- Microsoft Powerpoint — 1%
- Microsoft Outlook — 1%
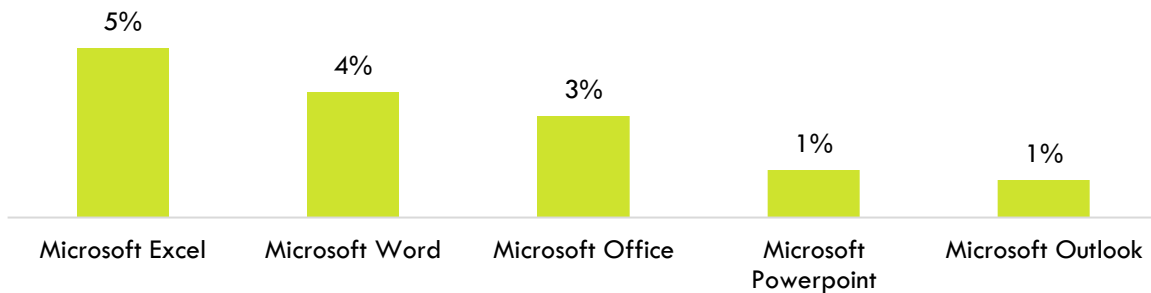
Certifications

Of the 1,231 job postings, 318 contained certification data. Among those, 42% indicated a need for a ServSafe. The next top certifications are food handler and food service (Exhibit 9). Please note 48% of job posting indicated a need for a driver's license, but a driver's license is not a certification.

Exhibit 9. Top Culinary Arts certifications requested in job postings

| 42% | 12% | 10% | 2% | 2% |
| ServSafe | Food Handler Certification | Food Service Certification | Phlebotomy Certification | First Aid Cpr Aed |

Education, Work Experience & Training

A high school diploma or equivalent is typically required for the first-line supervisors of food preparation and serving workers, food service managers, and chefs and head cooks. (Exhibit 10).

Exhibit 10. Education, work experience, training, and Current Population Survey results for Culinary Arts occupations[4]

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	Less than 5 years	None	36.7%
Chefs and Head Cooks	High school diploma or equivalent	5 years or more	None	35.8%

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[4] "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, https://www.bls.gov/cps/.

Supply

Analysis of program data from the Integrated Postsecondary Education Data System (IPEDS) included the TOP codes and titles: 130630 - Culinary Arts. Analysis of the last three years of data shows that, on average, 110 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/CIP Code- Title	College	Associate Degree	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 Junior	1					1
	San Joaquin Delta	26		17	9		51
	Sequoias		1	2		5	7
TOTAL		**55**	**4**	**25**	**21**	**5**	**110**

There is an undersupply of 1,727 Culinary Arts workers in the SCV/SML subregion and 2,703 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 fill gap in the SCV/SML subregion and region
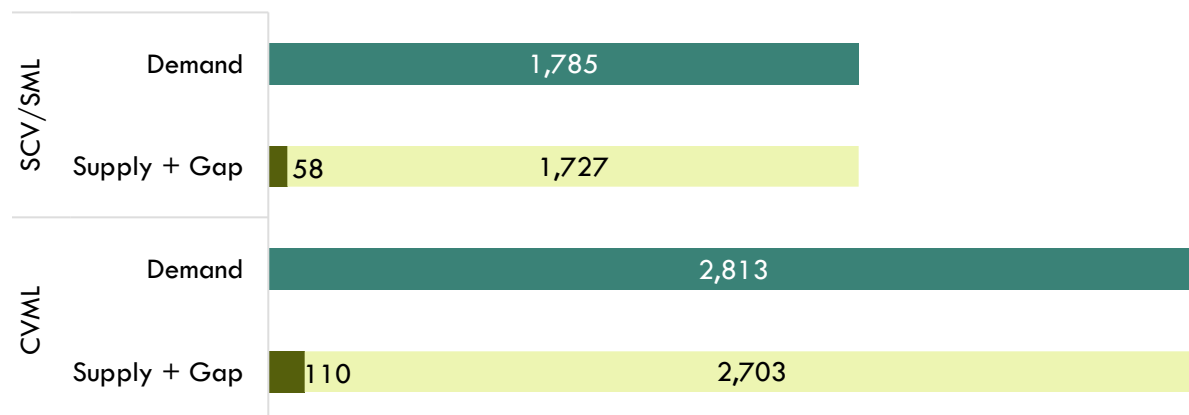
Student Outcomes

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, 12 culinary arts students received a degree or certificate or attained apprenticeship journey status; 12 students transferred; 67% of students obtained a job closely related to their field of study; 49% had a median change in earnings; and 51% of students 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	12
Number of Students Who Transferred	12
Job Closely Related to Field of Study	67%
Median Change in Earnings	49%
Attained a Living Wage	51%
* denotes data not available.	

Conclusion

The entry-level wages of the two occupations exceed the SCV/SML subregion's average living wage. There were 1,231 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 skills, and the top specialized skill is customer service.
- The top software skill is Microsoft Excel.
- The top certification is a ServSafe.

There is an undersupply of trained workers, a shortage of 1,727 in the SCV/SML subregion and 2,703 in the region.

Recommendation

Based on these findings, it is recommended that Madera College work with the regional directors, the college's advisory board, and local industry in the development of programs to address the shortage of Culinary Arts workers in the region.

Appendix A: Methodology & 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.
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. (Lightcast) 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.