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# Labor Market Analysis

## Culinary Arts



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Prepared by the 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

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 Modesto Junior College:

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

## Key findings:

- **Occupational demand** — Nearly 5,155 workers were employed in jobs related to Culinary Arts in 2021 in the North Central Valley/Northern Mother Lode (NCV/NML) subregion. The largest occupation is first-line supervisors of food preparation and serving workers with 4,130 workers, a projected growth rate of 19% over the next five years, and 819 annual openings.
- **Wages** — Chefs and head cooks earn the highest entry-level wage, \$15.18/hour in the subregion.
- **Employers** — Employers with the most job postings in the subregion are Starbucks Coffee Company, Great Wolf Lodge, 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 leadership, the top specialized skill is cash handler, and the top software skill is Microsoft Office. The most in-demand certification is a ServSafe.
- **Education** — A high school diploma or equivalent is typically required for 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 898 trained workers in the subregion and 2,326 workers in the region. The Center of Excellence recommends that Modesto Junior 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 Modesto Junior College to provide labor market information for Culinary Arts. The geographical focus for this report is the North Central Valley/Northern Mother Lode (NCV/NML) 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 NCV/NML subregion is \$12.63/hour.<sup>1</sup> 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 NCV/NML subregion employed 5,141 workers in Culinary Arts occupations in 2021 (Exhibit 1). The largest occupation is first-line supervisors of food preparation and serving workers with 4,130 workers in 2021. This occupation is projected to grow by 19% over the next five years and has the greatest number of projected annual openings, 819.

**Exhibit 1. Culinary Arts employment and occupational projections in the NCV/NML subregion**

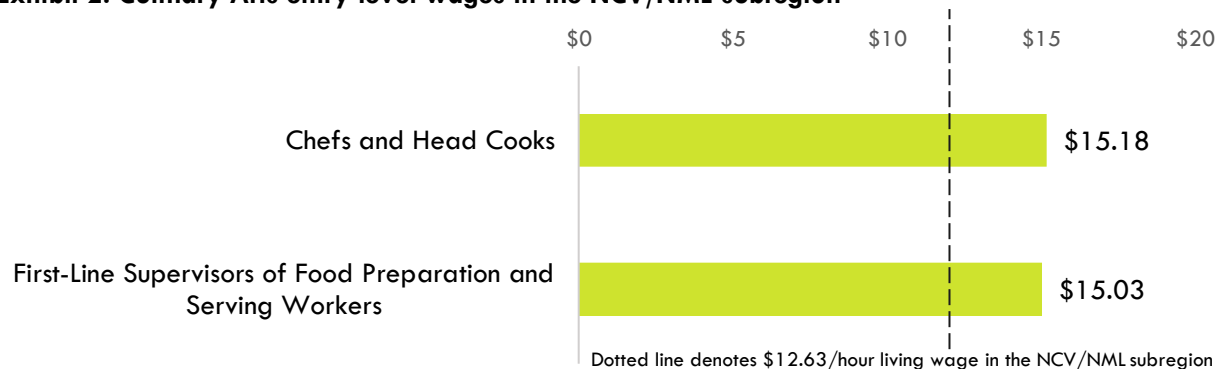
Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
First-Line Supervisors of Food Preparation and Serving Workers	4,130	4,931	801	19%	819
Chefs and Head Cooks	1,012	1,120	108	11%	157
<b>TOTAL</b>	<b>5,141</b>	<b>6,051</b>	<b>910</b>	<b>18%</b>	<b>976</b>

<sup>1</sup> 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, \$15.18/hour in the subregion<sup>2</sup>.

**Exhibit 2. Culinary Arts entry-level wages in the NCV/NML subregion**



# Job Postings

There were 1,148 job postings for the four occupations in the NCV/NML subregion from March 2022 to August 2022.<sup>3</sup> 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	158	16%
Great Wolf Lodge	112	11%
Taco Bell	78	8%
Americorps Nccc	73	7%
Target	29	3%
Panda Express	22	2%
Wingstop	19	2%
Aramark	12	1%
Five Guys Burgers	12	1%
Buffalo Wild Wings	11	1%

Exhibit 4 shows how job postings for the targeted occupations in the NCV/NML subregion are distributed across two O\*NET OnLine occupations. The occupational title First-Line Supervisors of Food Preparation and Serving Workers is listed in 1,039 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include Shift Leader in 89 job postings, Shift Lead in 80 job postings, and Food Service Supervisor in 35 job postings.

<sup>2</sup> Entry-level wages are derived from the 25<sup>th</sup> percentile.

<sup>3</sup> 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	1,039	91%
Chefs and Head Cooks	109	9%

**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	\$25,108
25th Percentile	\$28,028
50th Percentile	\$31,238
75th Percentile	\$38,838
90th Percentile	\$49,616

**Education**

Of the 1,148 job postings, 437 listed an education level preferred for the positions being filled. Among those, 83% requested high school or vocational training, 28% requested a bachelor’s degree, and 22% 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%.

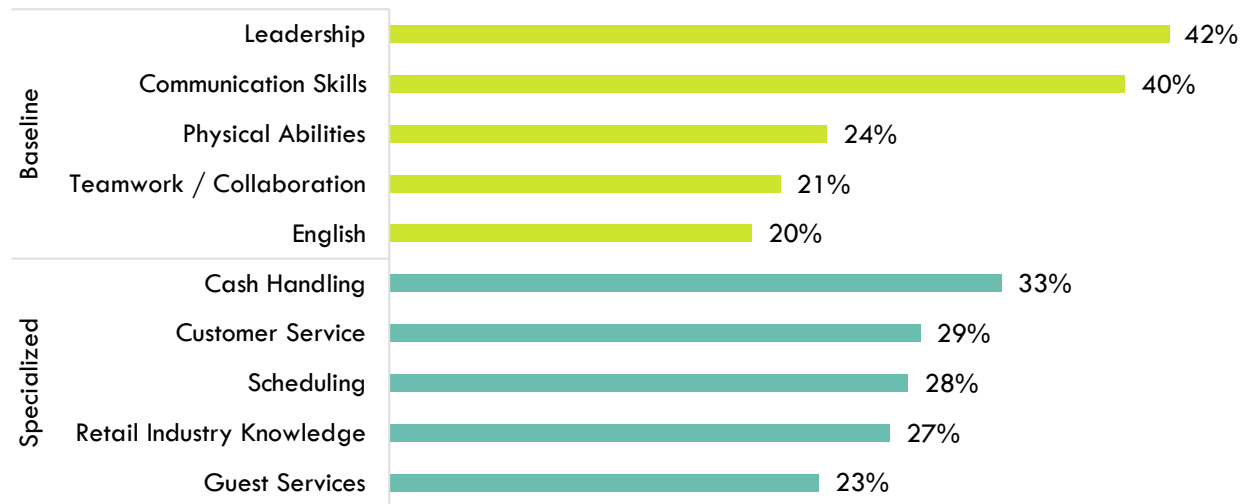
**Exhibit 6. Education levels requested in job postings for Culinary Arts**

Education Level	Job Postings	% of Job Postings
High school or vocational training	363	83%
Bachelor's degree	121	28%
Associate's degree	97	22%
Master's degree	18	4%

**Baseline and Specialized Skills**

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are leadership, 42% of job postings, communication skills, 40%, and physical abilities, 24%. The top three specialized skills are cash handling, 33% of job postings, customer service, 29%, and scheduling, 28%.

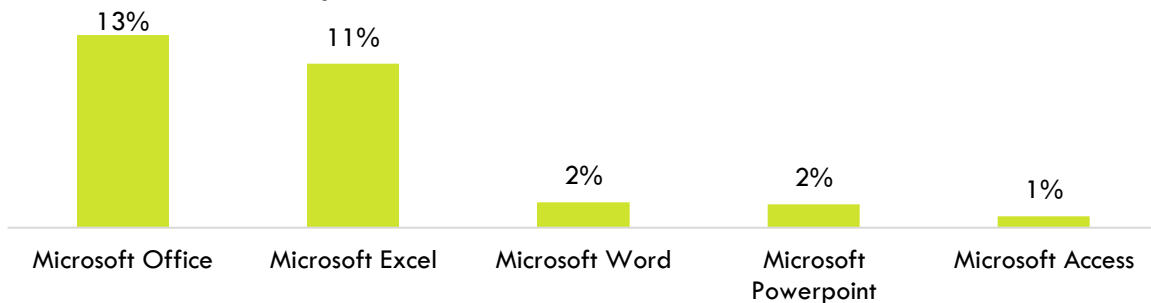
## Exhibit 7. In-demand Culinary Arts baseline and specialized skills



### Software Skills

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

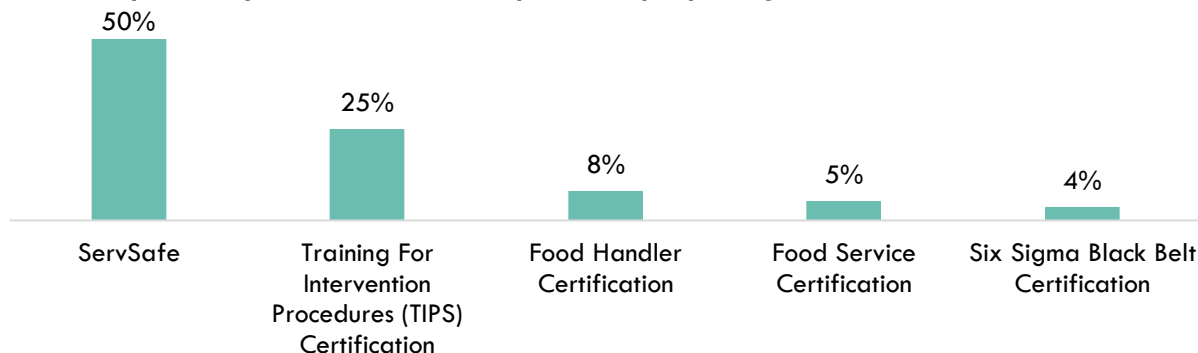
## Exhibit 8. In-demand Culinary Arts software skills



### Certifications

Of the 1,148 job postings, 295 contained certification data. Among those, 50% indicated a need for a ServSafe. The next top certifications are Training For Intervention Procedures (TIPS) and food handler (Exhibit 9). Please note 40% 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



# 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<sup>4</sup>**

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%

## 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**

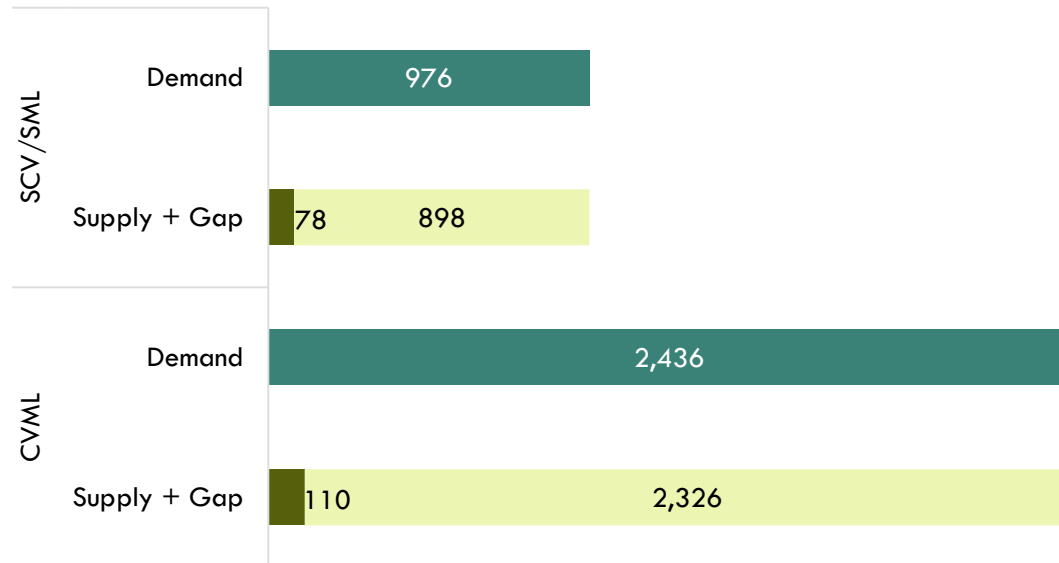
TOP/CIP Code- Title	College	Associate Degree	Certificate 16 < 30 Semester Units	Certificate 18 < 30 Semester Units	Certificate 30 < 60 Semester Units	Certificate 6 < 18 Semester Units	Subtotal
130630 - Culinary Arts	Bakersfield	17			7		24
	Columbia	6	1	3	5	0	15
	Merced	5	2	4			11
	Modesto	1					1
	San Joaquin Delta	26		17	9		51
	Sequoias		1	2		5	7
<b>TOTAL</b>		<b>55</b>	<b>4</b>	<b>25</b>	<b>21</b>	<b>5</b>	<b>110</b>

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



There is an undersupply of 898 Culinary Arts workers in the NCV/NML subregion and 2,326 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 NCV/NML 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, 38 culinary arts students received a degree or certificate or attained apprenticeship journey status; 24% had a median change in earnings; and 46% 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	38
Number of Students Who Transferred	*
Job Closely Related to Field of Study	*
Median Change in Earnings	24%
Attained a Living Wage	46%
* denotes data not available.	

# Conclusion

The entry-level wages of the two occupations exceed the NCV/NML subregion's average living wage. There were 1,148 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 leadership, and the top specialized skill is cash handling.
- The top software skill is Microsoft Office.
- The top certification is a ServSafe.

There is an undersupply of trained workers, a shortage of 898 in the NCV/NML subregion and 2,326 in the region.

# Recommendation

Based on these findings, it is recommended that Modesto Junior 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

## 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: <a href="http://economicmodeling.com">economicmodeling.com</a> .
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: <a href="https://www.bls.gov/emp/tables/educational-attainment.htm">https://www.bls.gov/emp/tables/educational-attainment.htm</a> .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: <a href="http://labormarketinfo.edd.ca.gov">labormarketinfo.edd.ca.gov</a> .
Job Posting and Skills Data	Burning Glass: <a href="http://burning-glass.com/">burning-glass.com/</a> .
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: <a href="http://onetonline.org">onetonline.org</a> .

## 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.