

Culinary Arts

Inland Empire/Desert Region (Riverside and San Bernardino counties combined)

Summary

- Employment for the culinary arts occupational group is expected to **increase by 15% between 2018 and 2023**. A total of **5,241 annual job openings** will be available each year over the five-year timeframe.
- The 75th percentile, experienced-level hourly wages for the culinary arts occupational group are between \$15.35 and \$32.18 per hour. Only the median wages for *chefs and head cooks* and *cooks, institution and cafeteria* are above the Family Needs Calculator wage estimate for a single adult with one school-age child. The median wage for *first-line supervisors of food preparation and serving workers* exceeds the \$18.00 regional “good wage.”
- There was an average of **95 credentials issued annually** from regional community college training programs over the last three academic years.
- The COE recommends starting new or expanding existing culinary arts programs to meet the regional need for more workers. The colleges should focus on occupations that offer a median-level, self-sustainable wage.

Introduction

This report provides data on the occupations related to the California Community College culinary arts (TOP 1306.30) program. This prepares students for employment through the instruction of the selection, storage, preparation, and service of food in quantity, including the culinary techniques used by chefs, institutional cooks, bakers, and catering services (Taxonomy of Programs, 2012). The occupations included in the culinary arts occupational group are the following:

- Bakers
- Chefs and Head Cooks
- Cooks, Institution and Cafeteria
- Cooks, Restaurant
- First-Line Supervisors of Food Preparation and Serving Workers

Job Opportunities

In 2018, there were 28,734 jobs in the culinary arts occupational group in the Inland Empire/Desert Region (IEDR). This occupational group is projected to increase employment by 15% through 2023. Employers are expected to have 26,207 job openings over the next five years to fill new jobs and backfill jobs that workers are permanently vacating (includes occupational transfers and retirements). Exhibit 1

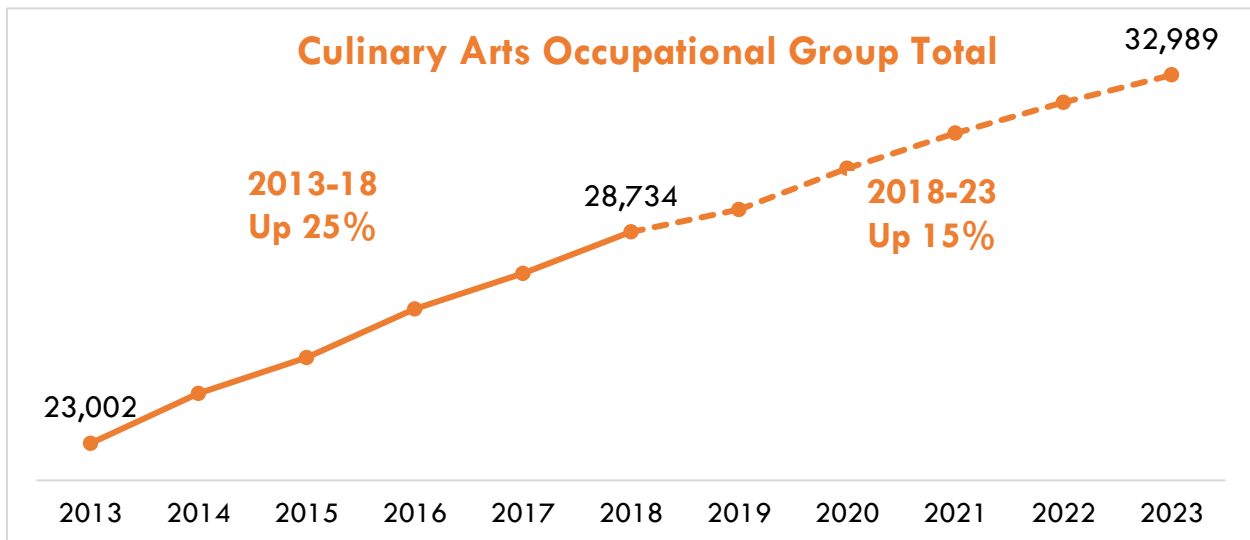
displays five-year projected job growth, and Exhibit 2 displays historical (2013 to 2018) and projected (2018-2023) jobs for the culinary arts occupational group.

Exhibit 1: Five-year projections for each occupation in the culinary arts occupational group

Occupation	2018 Jobs	2023 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Cooks, Restaurant	12,932	15,006	16%	11,766	2,353	15%
First-Line Supervisors of Food Preparation and Serving Workers	9,455	11,005	16%	9,270	1,854	16%
Cooks, Institution and Cafeteria	3,226	3,510	9%	2,636	527	23%
Chefs and Head Cooks	1,587	1,746	10%	1,241	248	18%
Bakers	1,535	1,723	12%	1,295	259	22%
Total	28,734	32,989	15%	26,207	5,241	17%

Source: EMSI 2020.1

Exhibit 2: Historical and projected jobs for the culinary arts occupational group, 2013 – 2023



Source: EMSI 2020.1

Job Postings

Exhibit 3 displays the number of job ads posted during the last 12 months along with the regional and statewide average time to fill for the culinary arts occupational group in the IEDR. On average, local employers fill online job postings for the culinary arts occupational group within 39 days. This regional average is one day shorter than the statewide average of 40 days, indicating that local employers face similar challenges filling open positions as other employers in California.

Exhibit 3: Job ads and time to fill, Feb 2019 – Jan 2020

Occupation	Job Ads	Regional Average Time to Fill (Days)	California Average Time to Fill (Days)
Cooks, Restaurant	2,620	42	43
First-Line Supervisors of Food Preparation and Serving Workers	2,483	36	37
Bakers	690	35	36
Chefs and Head Cooks	475	39	40
Cooks, Institution and Cafeteria	15	42	43
Total	6,283	39	40

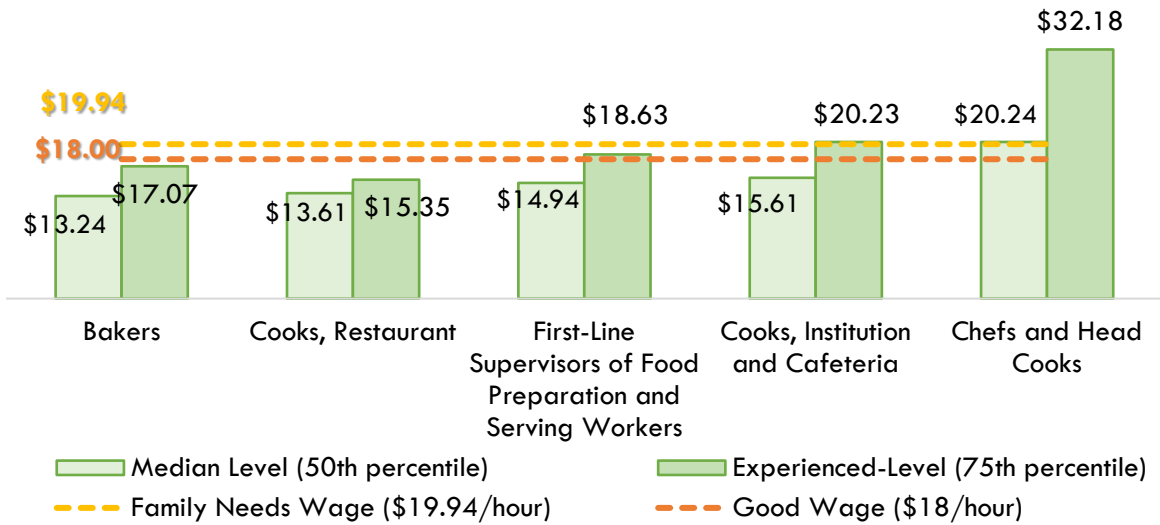
Source: Burning Glass – Labor Insights

Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide a self-sustainable level of income. The Brookings Institute in their *Advancing Opportunity in California's Inland Empire* report found that a “good job” wage in the region is above the \$18.00 per hour, or \$37,440 per year (Shearer, Shah & Gootman, p. 25). The Family Needs Calculator estimates that a self-sustainable wage for a single adult with one school-age child is \$19.94 hour (Pearce & Manzer, 2018).

The median hourly wages for the *chefs and head cooks* (\$32.18 per hour) and *cooks, institution and cafeteria* (\$20.23 per hour) exceed the Family Needs Calculator self-sustainability rate. The median was for *first-line supervisors of food preparation and serving workers* exceed the Brookings “good wage.” According to occupational guides developed by the California Labor Market Information Division, benefits for the culinary arts occupational group vary depending on type of establishment, full or part-time employment, and union representation (Detailed Occupational Guides, 2020). Exhibit 4 displays the hourly earnings for the culinary arts occupational group in the IEDR.

Exhibit 4: Hourly earnings for the culinary arts occupational group



Source: EMSI 2020.1

Employers, Skills, Education, and Work Experience

Exhibit 5 displays the names of employers posting the most job ads for the culinary arts occupational group during the last 12 months in the IEDR.

Exhibit 5: Employers posting the most job ads for culinary arts occupations, Feb 2019 – Jan 2020

Occupation	Employers
Cooks, Restaurant (n=2,334)	<ul style="list-style-type: none"> Marriott International, Inc. Chili's Grill & Bar Olive Garden Waldorf Astoria Hotels & Resorts Hilton Worldwide Holdings Inc. Yard House Red Lobster Brookdale Senior Living BJ'S Restaurant & Brewhouse P.F. Chang's China Bistro
First-Line Supervisors of Food Preparation and Serving Workers (n=2,266)	<ul style="list-style-type: none"> Starbuck's Coffee Company Marriott International, Inc. Panera Bread Company Jack in the Box Taco Bell El Pollo Loco
Bakers (n=639)	<ul style="list-style-type: none"> Panera Bread Company Marriott International, Inc. El Super Superior Grocers Albertsons Companies, Inc. WinCo Foods, Inc. Polly's Pies Marie Callender's
Chefs and Head Cooks (n=397)	<ul style="list-style-type: none"> Benihana, Inc. Marriott International, Inc. San Manuel Indian Casino Ra Sushi Bar & Restaurant Pechanga Resort Casino Soboba Casino Resort Big Wok Mongolian Grill Aramark

Occupation	Employers
Cooks, Institution and Cafeteria (n=11)	<ul style="list-style-type: none"> • Temecula Valley Hospital • Eisenhower Medical Center • Totally Kids Rehabilitation Hospital

Source: Burning Glass – Labor Insights

Exhibit 6 displays a sample of specialized and employability skills that employers are seeking when looking for workers to fill positions in the culinary arts occupational group. Specialized skills are occupation-specific skills that employers are requesting for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is commonly referred to as “soft skills.” The skills requested in job postings may be utilized as a helpful guide for curriculum development.

Exhibit 6: Sample of in-demand skills from employer job ads, Feb 2019 – Jan 2020

Occupation	Specialized Skills	Employability Skills
Cooks, Restaurant (n=1,676)	<ul style="list-style-type: none"> • Food Preparation • Cleaning • Scheduling • Food Safety 	<ul style="list-style-type: none"> • Physical Abilities • Teamwork/Collaboration • Detail-Oriented • Communication Skills
First-Line Supervisors of Food Preparation and Serving Workers (n=2,104)	<ul style="list-style-type: none"> • Customer Service • Cash Management • Store Operations • Scheduling 	<ul style="list-style-type: none"> • Communication Skills • Physical Abilities • Creativity • Leadership
Bakers (n=463)	<ul style="list-style-type: none"> • Cleaning • Food Preparation • Food Safety • Customer Service 	<ul style="list-style-type: none"> • Physical Abilities • Positive Disposition • Time Management • Self-Starter
Chefs and Head Cooks (n=363)	<ul style="list-style-type: none"> • Food Preparation • Budgeting • Scheduling • Staff Management 	<ul style="list-style-type: none"> • Communication Skills • Planning • Organizational Skills • Physical Abilities
Cooks, Institution and Cafeteria (n=14)	<ul style="list-style-type: none"> • Food Preparation • Food Service Sanitation • Cleaning 	<ul style="list-style-type: none"> • Organizational Skills • English • Teamwork/Collaboration

Source: Burning Glass – Labor Insights

Exhibit 7 displays the entry-level education typically required to enter each occupation according to the Bureau of Labor Statistics (BLS), educational attainment for incumbent workers with “some college, no degree” and an “associate degree” according to the U.S. Census (2016-17), and the minimum advertised education requirement from employer job ads.

Exhibit 7: Typical entry-level education, educational attainment, and minimum advertised education requirements for the culinary arts occupational group, Feb 2019 – Jan 2020

Occupation	Typical Entry-Level Education Requirement	Educational Attainment (Percentage of incumbent workers with a Community College Credential or Some Postsecondary Coursework)*	Minimum Advertised Education Requirement from Job Ads			
			Number of Job Ads (n=)	High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Cooks, Restaurant	No formal education credential	24%	467	97%	3%	-
First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	39%	764	87%	3%	10%
Bakers	No formal education credential	29%	121	100%	-	-
Chefs and Head Cooks	High school diploma or equivalent	41%	205	69%	21%	10%
Cooks, Institution and Cafeteria	No formal education credential	24%	6	100%	-	-

Source: EMSI 2020.1, Burning Glass – Labor Insights

Exhibit 8 displays the work experience typically required to enter each occupation and the real-time work experience requirements from employer job ads.

Exhibit 8: Work experience required and real-time work experience requirements, Feb 2019 – Jan 2020

Occupation	Work Experience Typically Required	Real-Time Work Experience			
		Number of job postings	0 – 2 years	3 – 5 years	6+ years
Cooks, Restaurant	Less than 5 years	668	82%	15%	3%

Occupation	Work Experience Typically Required	Real-Time Work Experience			
		Number of job postings	0 – 2 years	3 – 5 years	6+ years
First-Line Supervisors of Food Preparation and Serving Workers	Less than 5 years	1,174	84%	13%	3%
Bakers	None	315	84%	16%	-
Chefs and Head Cooks	5 years or more	229	38%	49%	13%
Cooks, Institution and Cafeteria	None	11	64%	36%	-

Source: EMSI 2020.1, Burning Glass – Labor Insights

Licensing and Certifications

Employers seeking candidates to fill open positions in the culinary arts occupational group frequently mentioned a desire for candidates with their Food Handler Card. Of the 1,387 total culinary arts job postings with certification information, 62% were seeking candidates with food handler certification. Unlike the majority of counties in California, Riverside and San Bernardino counties require that food handlers hold a certification specific to the county they work in. To obtain a Food Handler’s Card, an individual must take the necessary training course and pass the food handler’s test. For more information regarding food handler cards in Riverside, visit the Riverside County Department of Environmental Health website (Riverside County Department of Environmental Health, 2020). For more information regarding food handler cards in San Bernardino County, visit the San Bernardino Department of Public Health website (San Bernardino Department of Public Health, 2020).

Student Completions and Program Outcomes

Exhibit 9 displays completion data for the California Community College culinary arts (1306.30) program between 2015 and 2018, as well as enrollments in the 2016/17 academic year. The student completion and outcome methodology are available on page 13.

Exhibit 9: Annual average community college credentials and enrollments for the culinary arts program

1306.30 – Culinary Arts	Certificate		Associate		CCC Annual Average Credentials, Academic Years 2015-18	CCC Enrollments, Academic Year 2016-17
	18<30	30<60	Arts A.A.	Science A.S.		
	Semester Units					
Chaffey	-	13	-	-	13	153
Copper Mountain	-	2	-	-	2	50
Desert	6	6	6	1	18	399
Riverside	39	-	-	7	47	413
San Bernardino	-	14	-	-	14	214
Total	46	35	6	8	95	1,229

Source: LaunchBoard, MIS Data Mart *Chaffey issued one 18< 30-semester unit certificate in 2017-18.

Community college student outcome information based on the selected TOP codes and region is provided in Exhibit 10.

Exhibit 10: 1306.30 – Culinary arts strong workforce program outcomes

Strong Workforce Program Metrics: 1306.30 – Culinary Arts Academic Year 2016 -17, unless noted otherwise	Inland Empire/Desert Region	California
Course enrollments	1,229	26,686
Completed 9+ career education units in one year (2017-18)	283 (40%)	3,387 (32%)
Economically disadvantaged students	79%	70%
Students who attained a noncredit workforce milestone in a year	-	86%
Students who earned a degree, certificate, or attained apprenticeship (2017-18)	87	958
Transferred to a four-year institution (transfers)	-	163
Job closely related to the field of study (2015-16)	82%	74%
Median annual earnings (all exiters)	\$21,446	\$23,816
Median change in earnings (all exiters)	41%	37%
Attained a living wage (completers and skills-builders)	38%	31%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Credentials granted from other educational providers outside of the California Community College system are displayed in Exhibits 11 and 12 along with the relevant CIP code. Completion data is compiled from the Integrated Postsecondary Education Data System (IPEDS) for the most recent three years available. While the Argosy University-The Art Institute of California-Inland Empire has historically conferred awards

related to culinary arts, this institution closed in December 2018 and, therefore, will no longer supply the region with culinary workers.

Exhibit 11: Annual average community college credentials and enrollments for the baking and pastry arts/baker/pastry chef program in the IEDR

12.0501 – Baking and Pastry Arts/Baker/Pastry Chef	Award 1<2 Academic Years	Associate degree	Other Educational Providers Annual Average Credentials, Academic Years 2014-17
Argosy University-The Art Institute of California-Inland Empire (CLOSED DEC. 2018)	15	60	74
Total	15	60	74

Source: IPEDS

Exhibit 12: Annual average community college credentials and enrollments for the baking and pastry arts/baker/pastry chef program in the IEDR

12.0503 – Culinary Arts/Chef Training	Award 1<2 Academic Years	Associate degree	Other Educational Providers Annual Average Credentials, Academic Years 2014-17
Argosy University-The Art Institute of California-Inland Empire	11	88	99
Total	11	88	99

Source: IPEDS

Recommendation

California Community College culinary arts programs prepare students for employment through the instruction of the selection, storage, preparation, and service of food in quantity. Training for this program leads to five middle-skill occupations, depending on the focus of the training offered by the colleges. These occupations will have 5,241 annual job openings combined over the next five years. The median hourly wage for each occupation ranges from \$15.35 to \$32.18 per hour. Only three out of the five occupations have a median hourly wage that exceeds the \$18.00 per hour “good wage” established by the Brookings Institute.

The culinary arts programs are available at five regional community colleges. These programs reported a combined annual average of 95 credential awards over the last three academic years. Assuming that one credential is awarded to one student, the number of awards conferred is below the expected number of annual regional job openings (5,241 annual job openings). Argosy University offered competing programs in the region, conferring 173 average annual awards between 2014-2017. This institution closed its doors in December 2018 and is no longer training students. Based on this analysis, there appears to be an



opportunity to create new or expand existing culinary arts programs to meet the regional need for more workers.

Colleges considering culinary arts programs should focus their training on the occupations examined in this report that offer self-sustainable hourly wages; *chefs and head cooks* (\$32.18 per hour), *cooks, institution and cafeteria* (\$20.23 per hour), and *first-line supervisors of food preparation and serving workers* (\$18.63 per hour). Colleges should partner with relevant employers to understand their demand for more workers and the specific skills, licensing, and credentials needed for gainful employment in this field.

Contact

Michael Goss, Director
Center of Excellence, Inland Empire/Desert Region
michael.goss@chaffey.edu
February 2020

References

- Burning Glass Technologies. (2020). *Labor Insights/Jobs*. Retrieved from <https://www.burning-glass.com/>
- California Community Colleges Chancellor's Office. LaunchBoard. (2020). *California Community Colleges LaunchBoard*. Retrieved from <https://www.calpassplus.org/Launchboard/Home.aspx>
- California Community Colleges Chancellor's Office. LaunchBoard. (2020a). *Strong Workforce Program Metrics Data Element Dictionary*. Pg. 3. Retrieved from <https://www.calpassplus.org/MediaLibrary/calpassplus/launchboard/Documents/SWP-DED.PDF>
- California Community Colleges Chancellor's Office. (2020). *Chancellor's Office Curriculum Inventory (COCI), version 3.0*. Retrieved from <https://coci2.ccctechcenter.org/programs>
- California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. (2020). *Data Mart*. Retrieved from <https://datamart.cccco.edu/datamart.aspx>
- California Community Colleges Chancellor's Office, Curriculum and Instructional Unit, Academic Affairs Division. (2012). *Taxonomy of Programs, 6th Edition, Corrected Version*. Retrieved from <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Digital-Innovation-and-Infrastructure/Research/Files/TOPmanual6200909corrected12513.ashx?la=en&hash=94C709CA83C0380828415579395A5F536736C7C1>
- Economic Modeling Specialists International (EMSI). (2020). *Datarun 2020.1*. Retrieved from <https://www.economicmodeling.com/>
- Labor Market Information Division. Employment Development Department of California. (2020). *Detailed Occupational Guides*. Retrieved from <https://www.labormarketinfo.edd.ca.gov/OccGuides/Search.aspx>
- National Center for O*NET Development. (2020). *O*NET OnLine*. Retrieved from <https://www.onetonline.org/>
- Pearce, D., Manzer, L. Center for Women's Welfare at the University of Washington. (2018). Retrieved from <https://insightcced.org/2018-family-needs-calculator/>
- Riverside County Department of Environmental Health. (2020). *Food Handler Certification*. Retrieved from <https://www.rivcoeh.org/OurServices/Foods/FoodHandlerCertification>
- San Bernardino County Department of Public Health. (2020). Environmental Health Services. *Food Handlers & Managers*. Retrieved from <http://wp.sbcounty.gov/dph/programs/ehs/food-handlers-managers/>
- Shearer, C., Shah, I., Gootman, M. (2019, February). Metropolitan Policy Program at Brookings. *Advancing Opportunity in California's Inland Empire. Defining Opportunity*. (pg. 25). Retrieved from https://www.brookings.edu/wp-content/uploads/2019/02/Full-Report_Opportunity-Industries_Inland-California_Final_Shearer-Shah-Gootman.pdf
- U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics. *Integrated Postsecondary Education System (IPEDS)*. (2020). Retrieved from <https://nces.ed.gov/ipeds/use-the-data>

Appendix: Occupation definitions, sample job titles, five-year projections for culinary arts occupations

Occupation Definitions (SOC) code, Education and Training Requirement, Community College Educational Attainment

Chefs and Head Cooks (35-1011)

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.

Sample job titles: Banquet Chef; Certified Executive Chef (CEC); Chef; Chef, Instructor; Cook; Corporate Executive Chef; Executive Chef (Ex Chef); Executive Sous Chef; Head Cook; Line Cook

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: None

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 41%

First-Line Supervisors of Food Preparation and Serving Workers (35-1012)

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

Sample job titles: Cafeteria Manager, Dietary Supervisor, Food and Nutrition Services Supervisor, Food Production Supervisor, Food Service Director, Food Service Manager, Food Service Supervisor, Kitchen Manager, Kitchen Supervisor, Restaurant Manager

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement:

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 39%

Cooks, Institution and Cafeteria (35-2012)

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

Sample job titles: Cafeteria Cook, Chef, Cook, Dietary Cook, Dinner Cook, Food Service Specialist, Food Service Worker, Prep Cook (Preparatory Cook), School Cook, Sous Chef

Entry-Level Educational Requirement: No formal education credential

Training Requirement: Less than one month on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 24%

Cooks, Restaurant (35-2014)

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.

Sample job titles: Appetizer Preparer, Back Line Cook, Banquet Cook, Breakfast Cook, Broil Cook, Cook, Fry Cook, Grill Cook, Line Cook, Prep Cook (Preparation Cook)

Entry-Level Educational Requirement: No formal education credential

Training Requirement: One to twelve months of on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 24%

Bakers (51-3011)

Mix and bake ingredients to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods.

Sample job titles: Baker, Bakery Clerk, Bakery Manager, Cake Decorator, Dough Mixer, Machine Operator, Mixer, Pastry Chef, Processor, Scaler

Entry-Level Educational Requirement: No formal education credential

Training Requirement: More than 12 months of on-the-job training

Incumbent workers with a Community College Award or Some Postsecondary Coursework: 29%

Appendix: Student Completions and Program Outcome Methodology

Exhibit 9 displays the average annual regional California Community College (CCC) credentials conferred during the three academic years between 2015 and 2018, from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart, along with the enrollments from the most recent year available on LaunchBoard. Credentials are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variation that might be present in a single year. Enrollments are the count of enrollments in courses assigned to the TOP code in the selected year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from records provided by California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2020a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS), administered by Santa Rosa Junior College (LaunchBoard, 2020).

Table 1: 2018 to 2023 job growth, wages, education, training, and work experience required for the culinary arts occupational group, IEDR

Occupation (SOC)	2018 Jobs	5-Yr Change	5-Yr % Change	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage Range (25 th to 75 th percentile)	Median Hourly Wage (50 th percentile)	Average Annual Earnings	Typical Entry-Level Education & On-The-Job Training Required	Work Experience Required
Cooks, Restaurant (35-2014)	12,932	2,074	16%	2,353	\$12.01 to \$15.35	\$13.61	\$29,300	No formal educational credential & 1-12 months	Less than 5 years
First-Line Supervisors of Food Preparation and Serving Workers (35-1012)	9,455	1,550	16%	1,854	\$13.03 to \$18.63	\$14.94	\$34,700	High school diploma or equivalent & None	Less than 5 years
Cooks, Institution and Cafeteria (35-2012)	3,226	284	9%	527	\$12.66 to \$20.23	\$15.61	\$35,200	No formal educational credential & 1 month	None
Chefs and Head Cooks (35-1011)	1,587	159	10%	248	\$14.00 to \$32.18	\$20.24	\$50,900	High school diploma or equivalent & None	5 years or more
Bakers (51-3011)	1,535	188	12%	259	\$11.35 to \$17.07	\$13.24	\$30,800	No formal educational credential & More than 12 months	None
Total	28,734	4,255	15%	5,241	-	-	-	-	-

Source: EMSI 2020.1