Labor Market Analysis for:
1306.30 Culinary Arts
Inland Empire/Desert Center of Excellence, Sept 2024
Prepared by: Chris Cruzcosa, ccruzcosa@iegocollaborative.org

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Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	✓	☐	☐

Program LMI Endorsement Criteria		
Supply Gap	Yes ✓	No ☐
	Comments: There is *projected* to be **7,478 annual job openings** throughout the Inland Empire/Desert region, which is less than the **113 annual average awards conferred by educational institutions over the last 3 years.** Supply data includes both community college awards (113) and non-community college awards (0).	
Living Wage	Yes ✓	No ☐
	Comments: **All (100%) of annual job openings** for these five occupations **have entry-level hourly wages above the IE/D living wage of 13.74.**[1]	
Education	Yes ✓	No ☐
	Comments: **Most job postings for target occupations require a high school diploma or equivalent (70%).** See exhibits 8 and 9 for more details.	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Below Middle-Skill (typically require training/education less than a high school diploma)
  - Cooks, Institution and Cafeteria (35-2012)
  - Cooks, Restaurant (35-2014)
  - Bakers (51-3011)
- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor's degree)
  - Chefs and Head Cooks (35-1011)
  - First-Line Supervisors of Food Preparation and Serving Workers (35-1012)

Summary of findings

Demand

- The number of jobs related to the listed occupations is projected to increase 17% through 2028, with 7,478 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25th percentile hourly wage ranging from $16.69 to $20.89 in IE/D.
- There were 5,344 online job postings from 796 employers over the past 12-months with the highest postings for shift supervisors and shift leaders.
- Most job postings for target occupations require a high school diploma or equivalent (70%), followed by bachelor's degree (25%), and associate degree (5%).

Supply

- On average, there were 113 annual awards conferred by educational institutions over the last 3 years in related fields: 113 from community colleges and 0 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2021-22 academic year earned a median annual wage of $29,240 ($14.06 per hour).
- 80% of students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.
- Community college programs play an important role diversifying the talent pipeline in these occupations. Most IE/D professionals in food preparation occupations are Hispanic/Latino (54%), "early" or "mid-career" age categories (62%), and male (53%). Most community college students in related programs are Hispanic/Latino (62%), "pre-career/college" age category (64%), and female (61%).

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[1] *While the* <u>UW self-sufficiency standard</u> *is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of $16.00. For these reasons, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is $26.30 in Riverside County and $25.17 in San Bernadino County.*

Introduction

California Community College Culinary Arts (TOP 1306.30) programs prepare students for employment in 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, 2023). The knowledge, skills, and abilities trained by Culinary Arts programs lead to employment in occupations related to food preparation.

Job Demand

In 2023, there were 39,273 jobs in occupations related to food preparation in the IE/D region. Regional employment for this occupation group is projected to increase by 17% through 2028 with 7,478 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

Exhibit 1. Five-year projections for occupations related to food preparation, IE/D Region, 2023-2028

Occupation	SOC	2023 Jobs	2028 Jobs	2023 - 2028 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Chefs and Head Cooks	35-1011	3,188	3,516	10%	2,300	460
First-Line Supervisors of Food Preparation and Serving Workers	35-1012	14,984	17,143	14%	13,856	2,771
Cooks, Institution and Cafeteria	35-2012	2,533	2,926	16%	2,431	486
Cooks, Restaurant	35-2014	15,670	19,021	21%	16,236	3,247
Bakers	51-3011	2,898	3,237	12%	2,572	514
Total		39,273	45,843	17%	37,395	7,478

SOURCE: LIGHTCAST 2024.2

Job Postings

The following analysis for occupations related to food preparation using online job posting data.

Important note: The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.[2] While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to food preparation over the last 12 months and the median posting duration. Over the previous 12 months, there were 5,344 unique job postings for occupations related to food preparation in the region from 796 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, Aug 2023 – Jul 2024

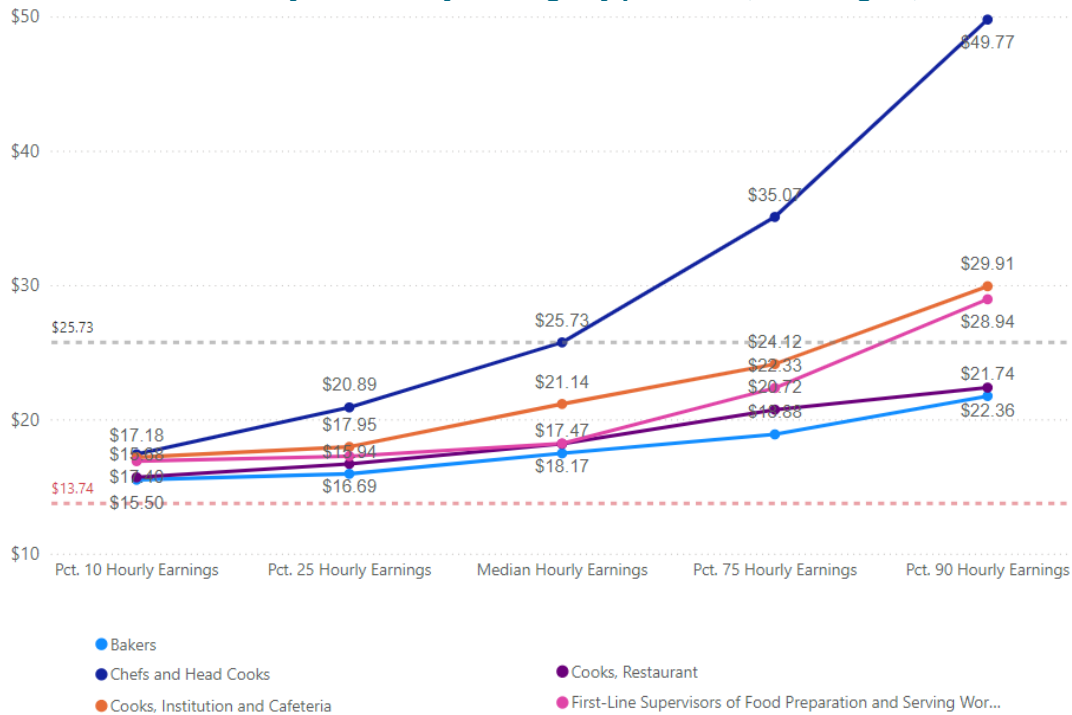| Job Title	Job Ads	Median Posting Duration
First-Line Supervisors of Food Preparation and Serving Workers	2,744	27 days
Cooks, Restaurant	1,348	26 days
Bakers	645	30 days
Chefs and Head Cooks	580	28 days
Cooks, Institution and Cafeteria	27	17 days
Total	5,344	

SOURCE: LIGHTCAST 2024.2

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[2] *"Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology*
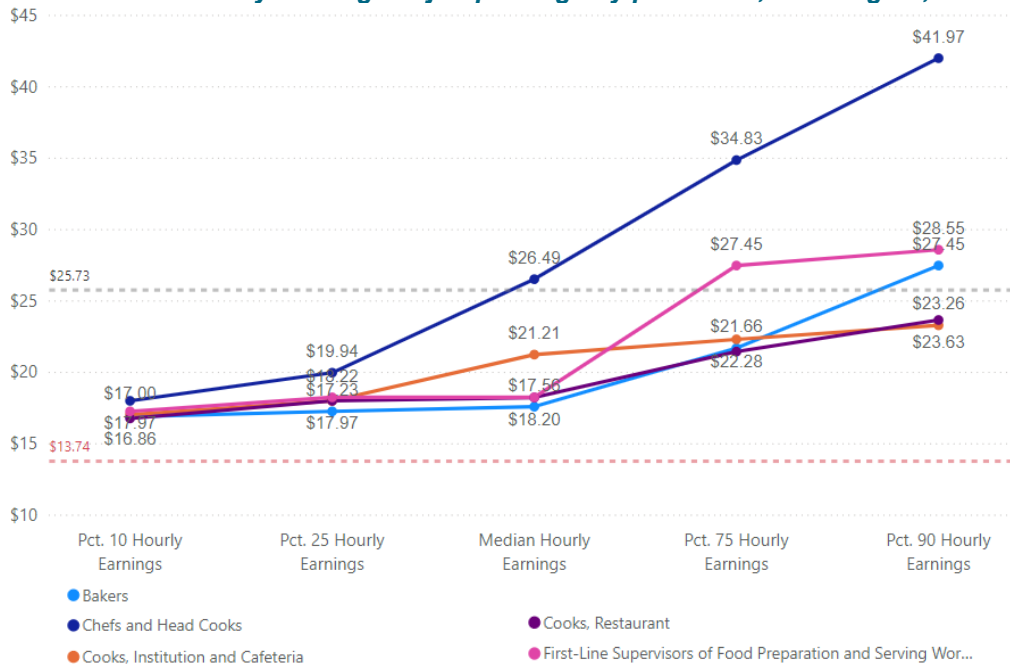
Earnings

Exhibit 3a displays the hourly earnings for occupations related to medical imaging and Exhibit 3b displays the hourly earnings for job postings of the same occupations and compares both to the UW Self-Sufficiency Standard for the IE/D[3] and the MIT IE/D living wage of $25.73.[4] The living wage criteria is determined using the data in exhibit 3a but Exhibit 3b is also shown to provide regional context using job posting data.

Exhibit 3a. Projected hourly earnings by percentile, IE/D Region, 2023

SOURCE: LIGHTCAST 2024.2

Exhibit 3b. Hourly earnings of job postings by percentile, IE/D Region, 2023

SOURCE: LIGHTCAST 2024.2

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[3] *While the* UW self-sufficiency standard *is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of $16.00. While the COE uses this standard for the LMI Wage criteria. For these reasons, this report provides an alternative living wage calculation from MIT in the analysis as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is $26.30 in Riverside County and $25.17 in San Bernadino County.*
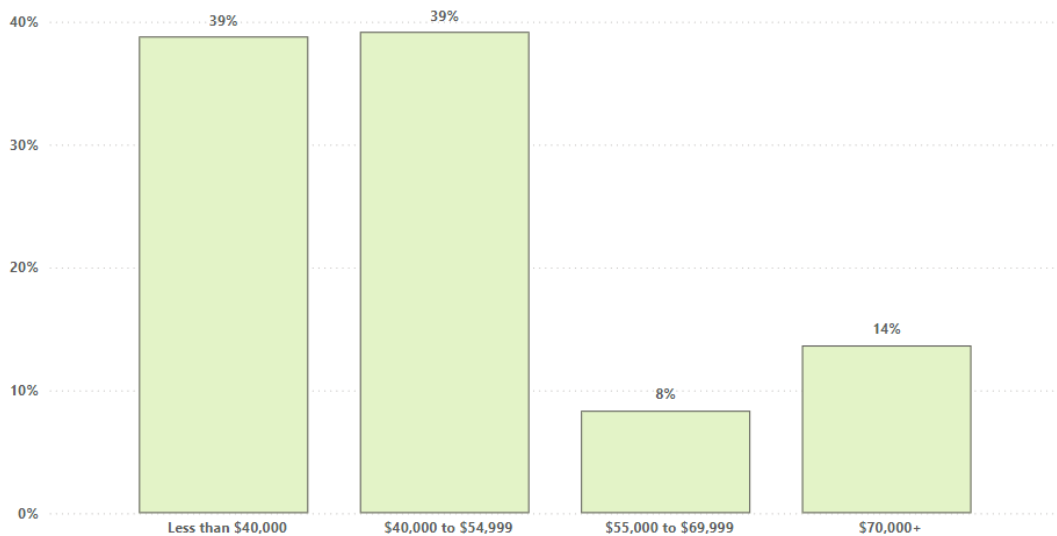
[4] *ibid.*

All projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) were above the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3a). However, the occupations listed were below the MIT living wage for an adult with no children ($25.73) in projected wages (see Exhibit 3a).

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to food preparation over the last 12 months. Online job ad salary information data suggests most employers (78%) advertise an annual salary less than $55,000 ($26.44 per hour).

Exhibit 4. Online advertised salaries occupations related to food preparation,
IE/D Region, Aug 2023 – Jul 2024

Bar chart:
- Less than $40,000: 39%
- $40,000 to $54,999: 39%
- $55,000 to $69,999: 8%
- $70,000+: 14%

SOURCE: LIGHTCAST 2024.2

Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to food preparation over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

Exhibit 5. Job titles most frequently used in job ads,
IE/D Region, Aug 2023 – Jul 2024

Job Title	Unique Postings
Shift Supervisors	740
Shift Leaders	594
Cooks	425
Shift Leads	228
Bakers	210
Prep Cooks	192
Cake Decorators	132
Bakery Clerks	126
Sushi Chefs	110
Sous Chefs	65

SOURCE: LIGHTCAST 2024.2

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. Starbucks and Walgreens Boots Alliance had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are deduplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast's Job Posting Analytics dashboard.

Exhibit 6. Employers posting the most job ads, IE/D Region, Aug 2023 – Jul 2024

Company	Total/Unique (Aug 2023 - Jul 2024)	Posting Intensity	Median Posting Duration
Starbucks	1,126 / 662	2 : 1	10 days
Walgreens Boots Alliance	1,064 / 137	8 : 1	30 days
Taco Bell	462 / 119	4 : 1	34 days
Rubio's Coastal Grill	526 / 116	5 : 1	35 days
El Super	263 / 86	3 : 1	45 days
Panera Bread	152 / 85	2 : 1	13 days
Marriott International	287 / 81	4 : 1	33 days
El Pollo Loco	218 / 79	3 : 1	39 days
Kentucky Fried Chicken	204 / 64	3 : 1	24 days
Compass Group	149 / 55	3 : 1	27 days

SOURCE: LIGHTCAST 2024.2

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today's demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole. [5]

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[5] *"What are Lightcast Skill Projects", Lightcast Knowledge base, https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections*
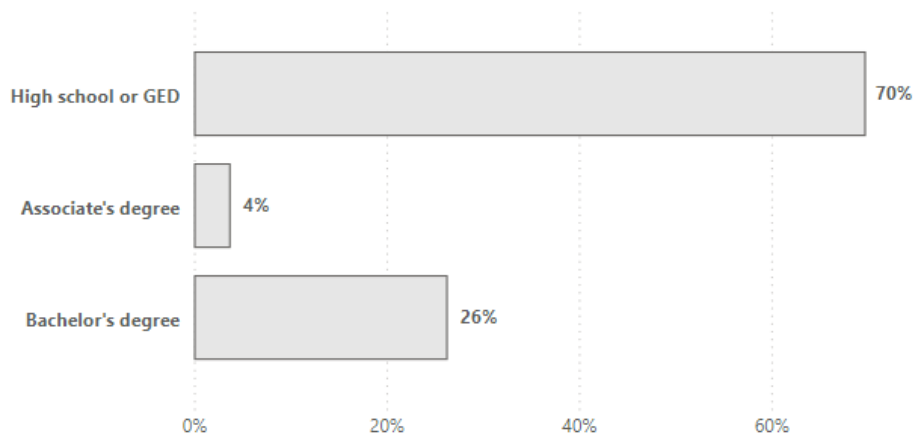
Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Region, Aug 2023 – Jul 2024

Common skills	Total Postings	Skill Growth Relative to Market
Communication	2,312	Lagging
Customer Service	2,194	Stable
Leadership	1,666	Stable
Management	1,530	Stable
Sanitation	1,162	Growing
Operations	1,036	Stable
Cleanliness	891	Growing
Proactivity	868	Rapidly Growing
Energetic	866	Growing
Coordinating	855	Growing

Specialized skills	Total Postings	Skill Growth Relative to Market
Restaurant Operation	2,465	Rapidly Growing
Food Safety And Sanitation	1,165	Growing
Cash Handling	1,124	Growing
Cooking	983	Growing
Food Preparation	787	Growing
Retail Operations	762	Growing
Food Services	528	Growing
General Mathematics	446	Growing
Merchandising	421	Growing
Baking	411	Stable

Computer Skills	Total Postings	Skill Growth Relative to Market
Microsoft Word	170	Stable
Microsoft Outlook	160	Rapidly Growing
Microsoft Excel	140	Growing
Microsoft Office	97	Growing
Warehouse Management Systems	55	Growing
SAP Applications	45	Rapidly Growing
Microsoft PowerPoint	36	Rapidly Growing
Spreadsheets	35	Rapidly Growing
Lync SDN (Software-Defined Networking) Manager	25	Growing
Kronos (Timekeeping Software)	24	Growing

SOURCE: LIGHTCAST 2024.2

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with a high school diploma or equivalent (70%), significantly greater than associate degree (4%) or bachelor's degree (25%).
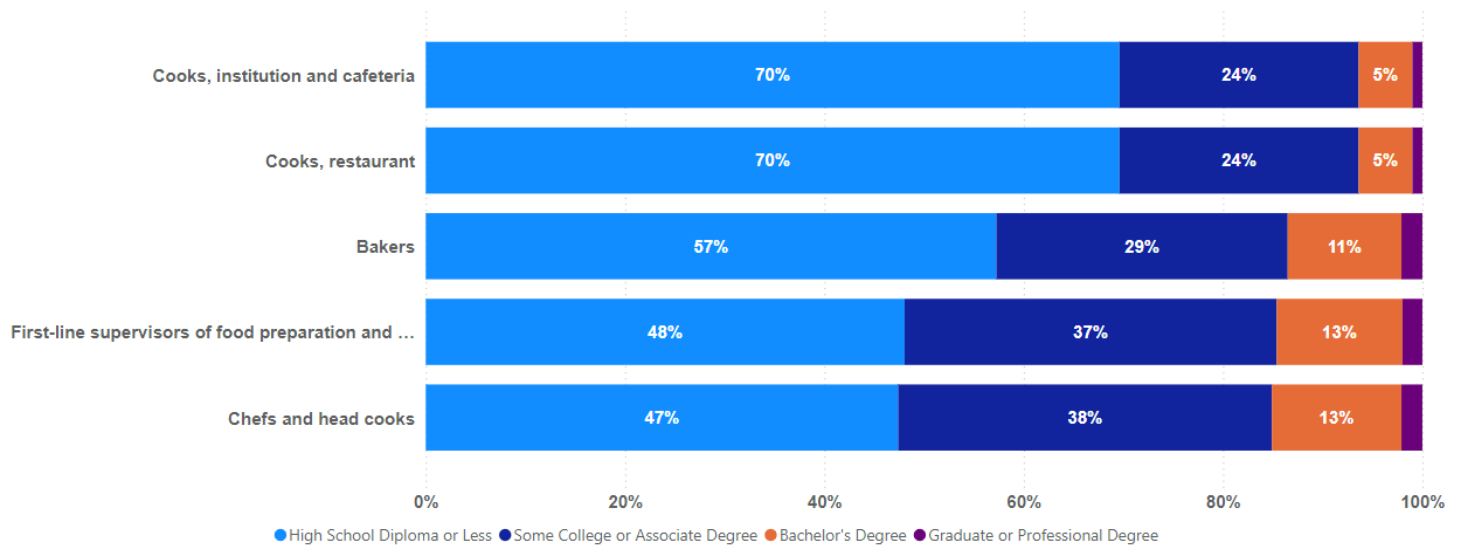
Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Aug 2023 – Jul 2024

High school or GED — 70%
Associate's degree — 4%
Bachelor's degree — 26%

SOURCE: LIGHTCAST 2024.2

For the listed occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 24% and 38% of workers have completed some college or an associate degree as their highest level of education.

Exhibit 9 National-level Education Attainment for Occupations

Cooks, institution and cafeteria — 70% / 24% / 5%
Cooks, restaurant — 70% / 24% / 5%
Bakers — 57% / 29% / 11%
First-line supervisors of food preparation and … — 48% / 37% / 13%
Chefs and head cooks — 47% / 38% / 13%

● High School Diploma or Less ● Some College or Associate Degree ● Bachelor's Degree ● Graduate or Professional Degree
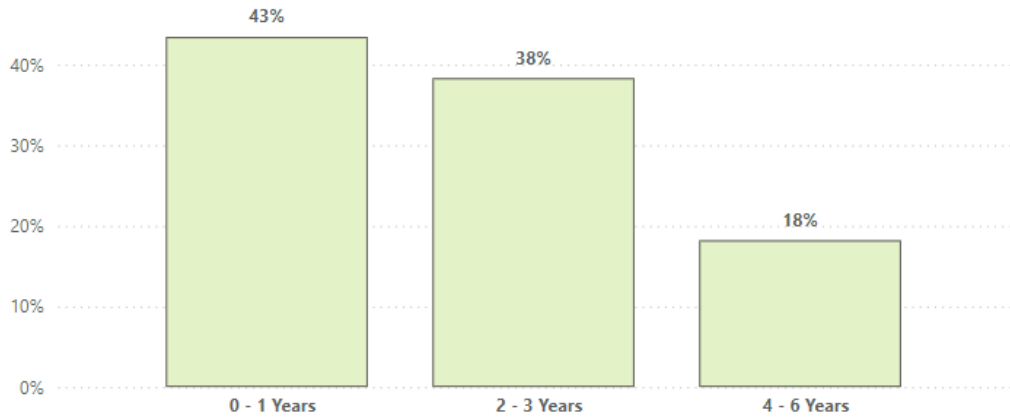
SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The plurality (43%) of employers listing minimum experience requirements sought candidates with 0-1 years of previous work experience.

Exhibit 10 Work experience requirements,
IE/D Region, Aug 2023 – Jul 2024

SOURCE: LIGHTCAST 2024.2

Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Culinary Arts (TOP 1306.30) programs over the last three academic years (2020-2023). In the previous three academic years, five regional community colleges issued an average of 113 awards in relevant programs.

Exhibit 11 Annual average community college awards for Culinary Arts (TOP 1306.30)

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
1306.30	Culinary Arts	Riverside	52	62	89	68
1306.30	Culinary Arts	Chaffey	22	25	24	24
1306.30	Culinary Arts	Desert	22	10	10	14
1306.30	Culinary Arts	San Bernardino	3	11	9	8
1306.30	Culinary Arts	Copper Mountain	0	1	0	0
Total			**99**	**109**	**132**	**113**

SOURCE: MIS DATA MART

Non-Community College Supply

Award completion data was not found for related – Cooking and Related Culinary Arts, General (CIP 12.0500), Baking and Pastry Arts/Baker/Pastry Chef (CIP 12.0501), Culinary Arts/Chef Training (CIP 12.0503), & Food Preparation/Professional Cooking/Kitchen Assistant (CIP 12.0505) – in the IE/D for non-community college programs.

Strong Workforce Program Outcomes

California program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12.

Exhibit 12 Culinary Arts strong workforce program outcomes, IE/D, most recent academic year

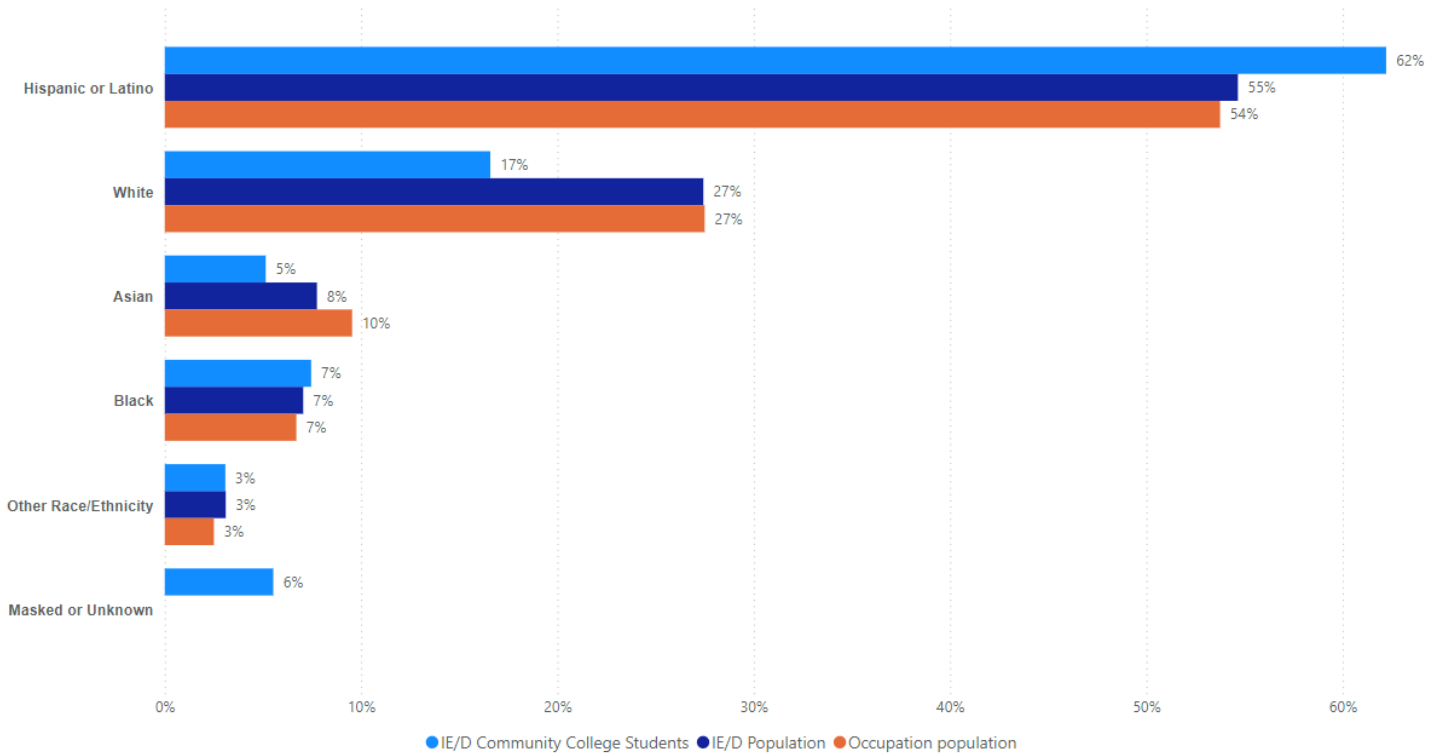| Program metric title	Inland Empire/Desert	Statewide
Attained a living wage (completers and skills-builders)	50%	42%
Completed 9+ career education units in one year	28%	34%
Job closely related to the field of study	80%	68%
Median annual earnings (all exiters)	$29,240	$32,340
Students who attained a noncredit workforce milestone in a year	27%	78%
Students who earned a degree, certificate, or attained apprenticeship	75	788
Unduplicated count of enrolled students	783	8,011

SOURCE: LAUNCHBOARD

Building an Inclusive Economy

This section examines demographic data for IE/D community college students in Culinary Arts programs compared to the IE/D population. We also include demographics for related occupation data for the five occupations related to food preparation. This analysis can be used to:

- Understand the community college system's current or potential role supporting a diverse talent pipeline into the occupations of interest.
- Inform students (and the faculty and staff working with them) the extent to which individuals from similar demographic groups are over or underrepresented in the professions related to their field of study.
- Inform employers of the diverse talent pipeline coming from the community college system for the occupations analyzed.

Notably, 5% of students enrolled in Culinary Arts programs are Asian, which is half the proportion than Asian workers in occupations related to food preparation in the IE/D region (10%). Additionally, 62% of IE/D community college students are Hispanic/Latino, which is higher than both the population that are employed in occupations related to food preparation (54%) and IE/D population (55%). Though 27% of the workers employed in occupations related to food preparation are White, only 17% students in Culinary Arts programs are White.

Exhibit 13 Program and County Demographics by Ethnicity
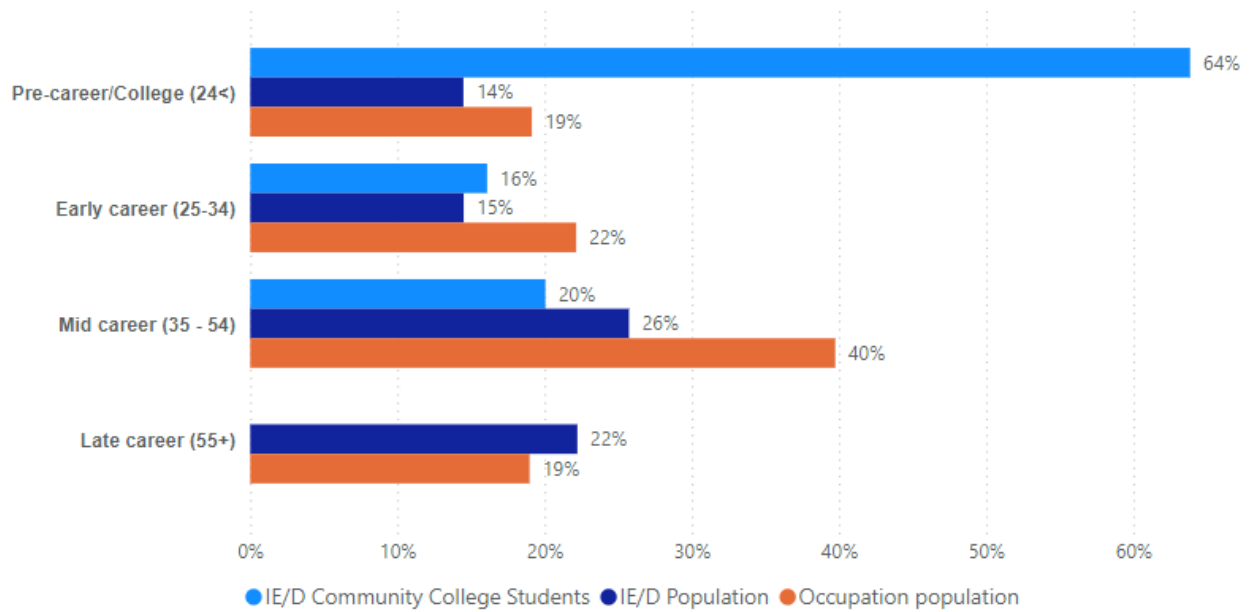

SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Most IE/D professionals in food preparation occupations are Hispanic/Latino (54%), "early" or "mid-career" age categories (62%), and male (53%). Most community college students in related programs are Hispanic/Latino (62%), "pre-career/college" age category (64%), and female (61%). Major takeaways:

- Community colleges are an important talent source for employers committed to greater racial/ethnic diversity, especially Hispanic/Latino professionals.
- Females are under-represented in the occupation population but over-represented in the community college student population for this program.

Exhibit 14 compares the age of IE/D community college students enrolled in Culinary Arts programs compared to the IE/D population.

The majority of students enrolled in Culinary Arts programs are either in the "pre-career/college" category (64%) as compared to IE/D population (14%) and workforce (19%) in these five occupations related to food preparation. These programs are an important entry point for young food preparation professionals.
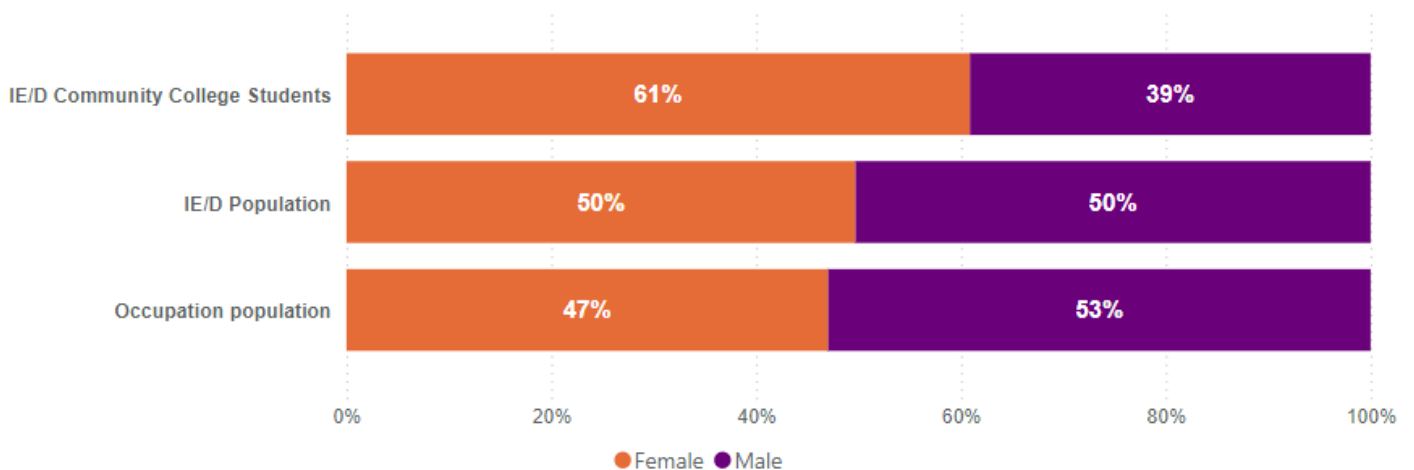
Exhibit 14 Program and County Demographics by Age

SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Exhibit 15 compares the gender of IE/D County community college students enrolled in Culinary Arts programs compared to the IE/D population. We also include demographics for related occupation data for the five occupations related to food preparation to identify potential diversity and equity issues addressable by community college programs.

Exhibit 15 Program and County Demographics by Gender

SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2020 and 2023 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single 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 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, 2023a). 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, 2023a).

Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment. https://lightcast.io/
Living Wage	The living wage is derived from MITs Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: https://livingwage.mit.edu/pages/methodology The living wage for one adult in San Bernardino County is $25.17 per hour ($52,353.60 annually). The living wage for one adult in Riverside County is $26.30 per hour ($54,704 annually). The average living wage to represent Inland Empire/Desert is $25.74 per hour (53,539.20 annually)
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see https://www.bls.gov/emp/documentation/education/tech.htm
Educational Supply	The CCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://www.calpassplus.org/LaunchBoard/Home.aspx