

# Labor Market Analysis for Program Recommendation:

1306.30/Culinary Arts

12.0501/Baking and Pastry Arts/Baker/Pastry Chef

*(Baking and Pastry Foundation Certificate of Achievement)*

Orange County Center of Excellence, August 2025



FOR LABOR MARKET RESEARCH

ORANGE COUNTY

## Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met <input type="checkbox"/>	Endorsed: Some LMI Criteria Met <input checked="" type="checkbox"/>	Not LMI Endorsed <input type="checkbox"/>
<b>Program LMI Endorsement Criteria</b>			
	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Supply Gap:	<i>Comments:</i> there is projected to be <b>3,881 annual job openings</b> throughout Los Angeles and Orange counties for these baking and pastry occupations, which <b>is more than the 910 awards conferred by educational institutions.</b>		
	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
Self-Sufficiency Standard Living Wage <sup>1</sup> :	<i>Comments:</i> <b>all annual job openings</b> for these baking and pastry occupations <b>have entry-level hourly wages below the OC living wage of \$27.13.</b>		
	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Education:	<i>Comments:</i> roughly half (58%) of the annual job openings for the two baking and pastry occupations typically require no formal educational credential, and the remaining 42% require a high school diploma or equivalent. <b>However, between 30% and 38% of workers in the field have completed some college or an associate degree as their highest level of education.</b>		
<b>Additional Considerations</b>			
Emerging Occupation(s):	Yes <input type="checkbox"/>	Some <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> N/A		
OC Resilient Job(s):	Yes <input type="checkbox"/>	Some <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> See <a href="#">Resilient Jobs and US News &amp; World Report Best Jobs</a>		
U.S. News & World Report 2025 Best Jobs List <sup>2</sup> :	Yes <input type="checkbox"/>	Some <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> See <a href="#">Resilient Jobs and US News &amp; World Report Best Jobs</a>		

<sup>1</sup> The living wage endorsement criteria in this report uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard, which the COE refers to as a living wage; Orange County's living wage of \$27.13, was last updated in March 2024.

<sup>2</sup> "100 Best Jobs," U.S. News & World Report, accessed January 28, 2025, <https://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs>.

The Orange County Center of Excellence for Labor Market Research (OC COE) prepared this report to determine whether there is a supply gap in the Los Angeles/Orange County regional labor market related to two occupations:

- Below Middle-Skill – denoted with an asterisk (\*) throughout this report
  - *Bakers (51-3011)\**
- Middle-Skill
  - *Chefs and Head Cooks (35-1011)*

Based on the available data, there appears to be a supply gap for these baking and pastry occupations. However, typical education requirements for these occupations do not align with a community college education, and all annual job openings have entry-level wages below the Self-Sufficiency Standard living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the occupations included in this report.

Exhibit 1: Labor Market Endorsement Summary

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25th Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Bakers (51-3011)*	LA: 1,711 OC: 527 TTL: 2,238	<i>Accounted for Below</i>	OC: \$16.80	No formal educational credential	30%
<b>Below Middle-Skill Total (*)</b>	<b>2,238</b>		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Chefs and Head Cooks (35-1011)	LA: 1,213 OC: 430 TTL: 1,643	LA: 618 OC: 293 TTL: 910	OC: \$23.76	High school diploma or equivalent	38%
<b>Middle-Skill Total</b>	<b>1,643</b>	<b>910</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Total</b>	<b>3,881</b>	<b>910</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

**Demand:**

- The number of jobs related to these baking and pastry occupations is projected to increase 5% through 2029, equating to 3,881 annual job openings.
- Hourly entry-level wages for these baking and pastry occupations range from \$16.80 to \$23.76 in Orange County; all annual job openings have entry-level wages below the Self-Sufficiency Standard living wage.

- There were 6,883 online job postings for these baking and pastry occupations over the past 12 months. The highest number of postings were for sushi chefs, sous chefs, and chefs.
- The typical entry-level education for these baking and pastry occupations ranges from no formal educational credential to a high school diploma or equivalent.
- Between 30% and 38% of workers in the field have completed some college or an associate degree as their highest level of educational attainment.

### Supply:

- There was an average of 842 awards conferred by 22 community colleges in Los Angeles and Orange Counties from 2021 to 2024.
- Non-community college institutions conferred an average of 68 awards from 2020 to 2023.
- Orange County community college students that exited culinary arts programs in the 2022-23 academic year had a median annual wage of \$39,092 (\$18.79 per hour) after exiting the program and 25% attained the regional living wage.
- Throughout Orange County, 79% of culinary arts students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.

### Demand

#### Occupational Projections:

Exhibit 2 shows the annual percent change in jobs for these baking and pastry occupations from 2019 through 2029. There was a 7% decrease across all occupations in Los Angeles and Orange counties from 2019 to 2020 due to the COVID-19 pandemic. However, employment in these two baking and pastry occupations decreased in 2020, then rebounded and increased in 2021. These baking and pastry occupations are projected to grow at a similar rate as all occupations through 2029.

Exhibit 2: Annual Percent Change in Jobs for Baking and Pastry Occupations, 2019-2029

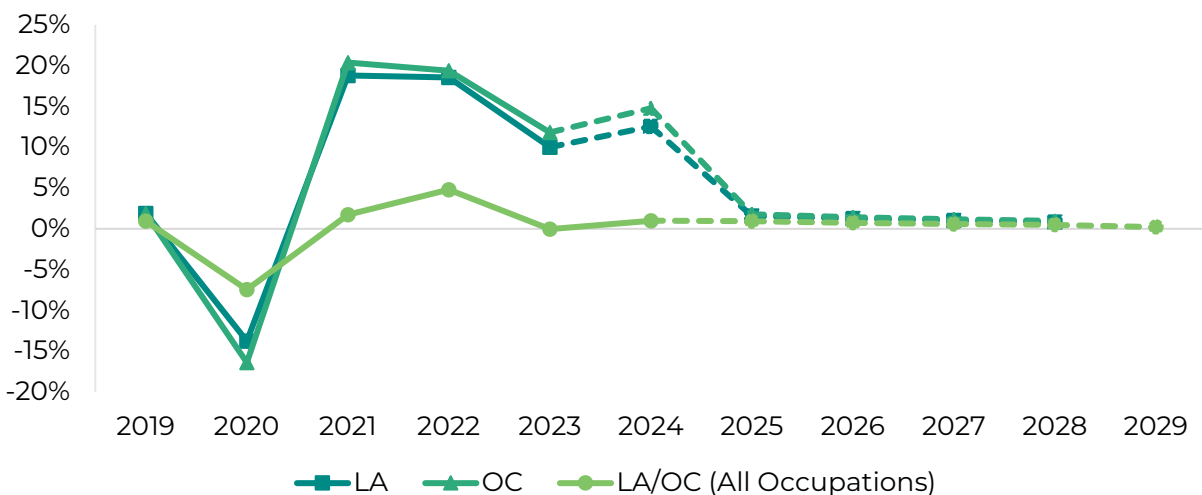


Exhibit 3 shows the five-year occupational demand projections for the below-middle skill baking and pastry occupation, *bakers\**. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 5% through 2029. There is projected to be 2,238 jobs available annually.

Exhibit 3: Below Middle-Skill Occupational Demand in Los Angeles and Orange Counties<sup>3</sup>

Geography	2024 Jobs	2029 Jobs	2024-2029 Change	2024-2029 % Change	Annual Openings
Los Angeles	10,265	10,617	352	3%	1,711
Orange	3,088	3,239	150	5%	527
<b>Total</b>	<b>13,353</b>	<b>13,856</b>	<b>502</b>	<b>4%</b>	<b>2,238</b>

Exhibit 4 shows the five-year occupational demand projections for the middle-skill baking and pastry occupation, *chefs and head cooks*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 7% through 2029. There are projected to be 1,643 jobs available annually.

Exhibit 4: Middle Skill Occupational Demand in Los Angeles and Orange Counties

Geography	2024 Jobs	2029 Jobs	2024-2029 Change	2024-2029 % Change	Annual Openings
Los Angeles	8,865	9,516	651	7%	1,213
Orange	3,150	3,376	226	7%	430
<b>Total</b>	<b>12,015</b>	<b>12,892</b>	<b>877</b>	<b>7%</b>	<b>1,643</b>

### Wages:

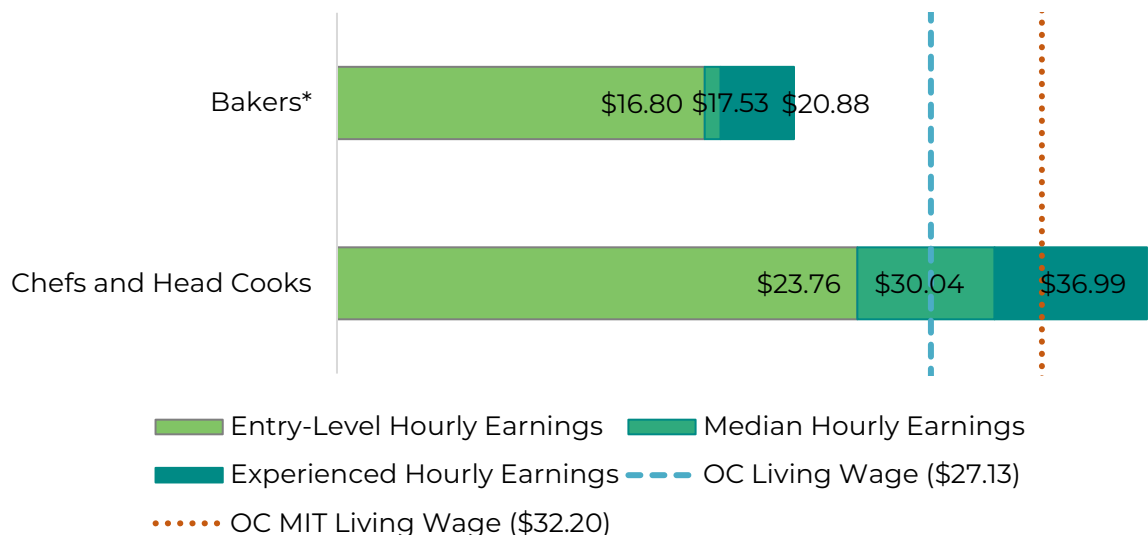
The labor market endorsement in this report considers the entry-level hourly wages for these baking and pastry occupations in Orange County as they relate to the county's living wage. Los Angeles County wages are included below to provide a complete analysis of the LA/OC region.

In addition to the Self Sufficiency Standard living wage, data for the MIT Living Wage, updated on February 10, 2025, is provided as a reference. Currently, the MIT Living Wage in Orange County is \$32.20. Both figures account for geographic-specific costs of necessities such as housing, food, health care, and transportation to assess the cost of living, and are notated in the exhibits below.

All annual openings for these two baking and pastry occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$27.13 in Orange County). Typical entry-level hourly wages range between \$16.80 and \$23.76. Orange County's average wages of \$25.50 are below the average statewide wage of \$26.19 for these occupations. Exhibit 5 shows the wage range for each of these occupations in Orange County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

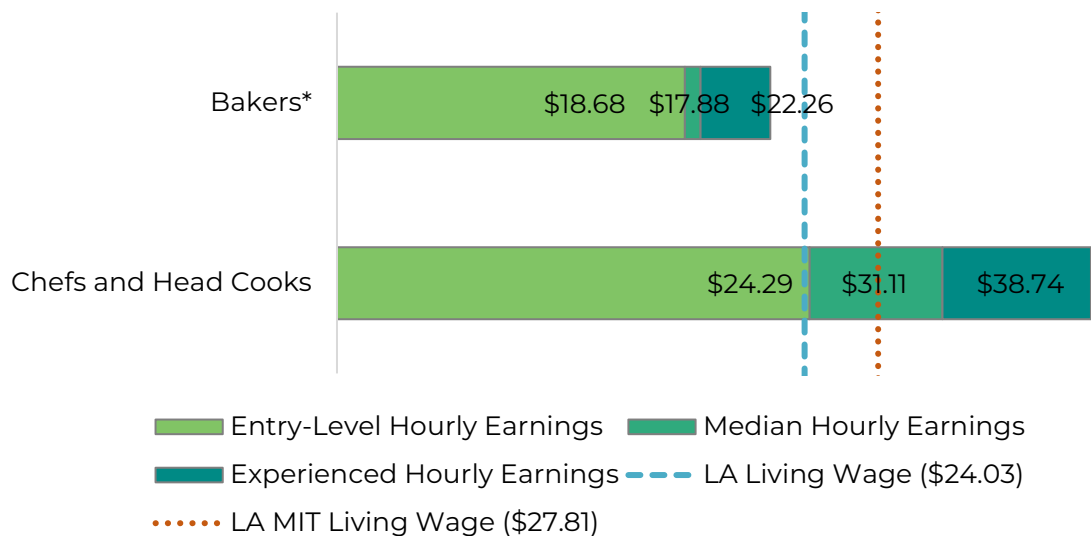
<sup>3</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Exhibit 5: Wages by Occupation in Orange County



All annual openings for these two baking and pastry occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult (\$24.03 in Los Angeles County). Typical entry-level hourly wages range between \$17.88 and \$24.29. Los Angeles County’s average wages of \$26.09 are similar to the average statewide wage of \$26.19 for these occupations. Exhibit 6 shows the wage range for these two occupations in Los Angeles County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

Exhibit 6: Wages by Occupation in Los Angeles County



## Resilient Jobs and U.S. News & World Report Best Jobs:

Exhibit 7 shows if each occupation is considered an Orange County Great Recession-Resilient, COVID-19 Pandemic Recession-Resilient Job, or a 2025 U.S. News & World Report (USN&WR) Best Job. None of the two baking and pastry occupations met the criteria to be considered a COVID-19 Pandemic Recession-Resilient Job, a Great Recession-Resilient Job, or a USN&WR Best Jobs.

Exhibit 7: Resilient Jobs and USN&WR Best Jobs Designations

Occupation	Great Recession-Resilient Job	COVID-19 Pandemic Recession-Resilient Job	2025 USN&WR Best Job
Chefs and Head Cooks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bakers*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Job Postings:

**Important Online Job Postings Data Note:** There are limitations when analyzing job postings. A single job posting may not represent a single job opening for a variety of reasons.

There were 6,833 online job postings related to the two baking and pastry occupations listed in the past 12 months. Exhibit 8 shows the number of job postings by occupation. The majority (60%) of job postings were for *chefs and head cooks* while 40% were for *bakers*\*

Exhibit 8: Number of Job Postings by Occupation (n=6,833)

Occupation	Job Postings	Percentage of Job Postings
Chefs and Head Cooks	4,082	60%
Bakers*	2,751	40%
<b>Total Postings</b>	<b>6,833</b>	<b>100%</b>

## Job Postings for Below Middle-Skill Occupation

The top employers for *bakers*\* in the region, by number of job postings, are shown in Exhibit 9.

Exhibit 9: Top Employers by Number of Job Postings for the Below Middle-Skill Occupation (n=2,751)

Employer	Job Postings	Percentage of Job Postings
Whole Foods	119	4%
El Super	102	4%
Albertsons	79	3%
Sprouts Farmers Market	74	3%
Costco	66	2%
Bruegger's	64	2%
Sprinkles Cupcakes	61	2%
Panera Bread	59	2%
Bristol Farms	47	2%
Kroger	47	2%

The top specialized, soft, and computer skills for *bakers*\* listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 10.

Exhibit 10: Top Skills by Number of Job Postings for the Below Middle-Skill Occupation (n=2,751)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Baking (1,212)	Customer Service (962)	Microsoft Outlook (52)
Food Safety And Sanitation (773)	Communication (769)	Microsoft Office (23)
Cake Decorating (732)	Sanitation (625)	Microsoft Excel (9)
Restaurant Operation (478)	Cleanliness (615)	Google Workspace (7)
Merchandising (464)	Lifting Ability (502)	Web Browsers (7)
Breads (384)	Sales (455)	Firefox (6)
Food Preparation (275)	Detail Oriented (438)	Microsoft Edge (6)
General Mathematics (256)	Multitasking (415)	Safari (Web Browser) (6)
Inventory Management (232)	Management (376)	Reporting Tools (5)
Safety Standards (226)	Time Management (369)	Qt (Software) (4)

### Job Postings for Middle-Skill Occupation

The top employers for *chefs and head cooks* in the region, by number of job postings, are shown in Exhibit 11.

Exhibit 11: Top Employers by Number of Job Postings for the Middle-Skill Occupation (n=300)

Employer	Job Postings	Percentage of Job Postings
Compass Group	175	4%
Marriott International	94	2%
Oakmont Senior Living	55	1%
Disney	50	1%
Hilton	38	1%
Sodexo	37	1%
Le Chef Bakery	36	1%
Benihana	33	1%
Aimbridge Hospitality	32	1%
Csc Generation	32	1%

The top specialized, soft, and computer skills for *chefs and head cooks* listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 12.

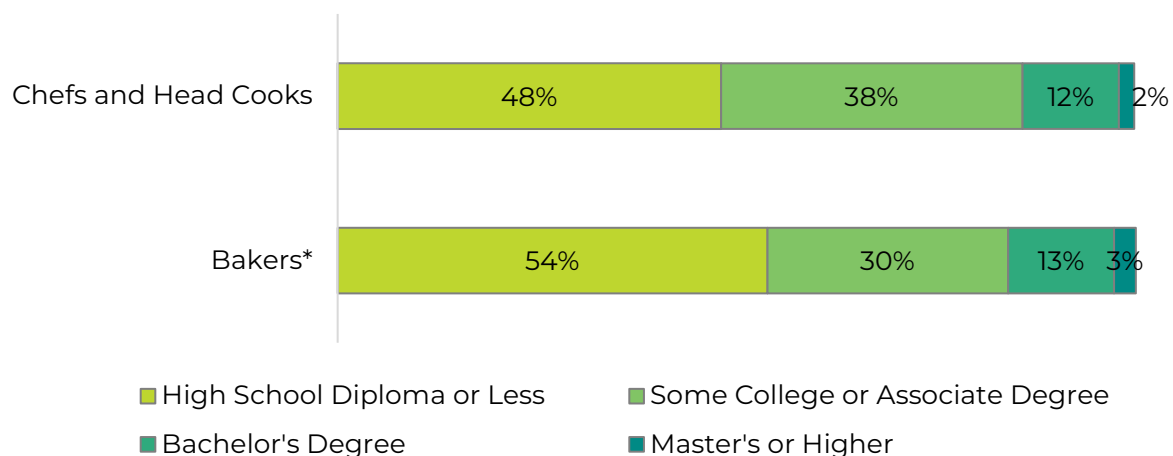
Exhibit 12: Top Skills by Number of Job Postings for the Middle-Skill Occupation (n=300)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Restaurant Operation (1,484)	Communication (1,552)	Microsoft Excel (242)
Food Safety And Sanitation (1,378)	Operations (1,406)	Microsoft Office (210)
Cooking (1,356)	Sanitation (1,372)	Microsoft Outlook (206)
Food Preparation (933)	Management (1,204)	Microsoft PowerPoint (154)
Menu Planning (815)	Leadership (1,159)	Microsoft Word (139)
Food Services (624)	Customer Service (981)	Spreadsheets (45)
Inventory Management (574)	Cleanliness (904)	Operating Systems (34)
Culinary Arts (531)	Detail Oriented (768)	Inventory Management System (32)
Food Quality Assurance And Control (496)	Innovation (516)	Test Kitchen (12)
Workflow Management (26)	Presentations (66)	Adobe Creative Suite (8)

### Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent for *chefs and head cooks*, and no formal educational credential for *bakers\**. However, the national-level educational attainment data indicates between 30% and 38% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 13 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Exhibit 13: National-level Educational Attainment for Occupations



Of the 21% of the cumulative job postings for the middle-skill occupation *chefs and head cooks* that listed a minimum education requirement in Los Angeles/Orange County, 76% (636) requested a high school diploma or associate degree, and 24% (200) requested a bachelor's degree.

Of the 23% of the cumulative job postings for the below middle-skill occupation *bakers\** that listed a minimum education requirement in Los Angeles/Orange County, 81% (507) requested a high school diploma or associate degree, and 1% (9) requested a bachelor's degree.

## Educational Supply

The following supply tables displays the total supply for the two baking and pastry occupations that align with these TOP/CIP codes and program needs.

### Community College Supply:

Exhibit 14 shows the three-year average number of awards conferred by community colleges in the related TOP codes:

- Nutrition, Foods, and Culinary Arts (1306.00)
- Culinary Arts (1306.30)

The colleges with the most completions in the region are LA Trade, LA Mission, and Orange Coast. Over the past 12 months, there was 1 other related program recommendation request from regional community colleges.

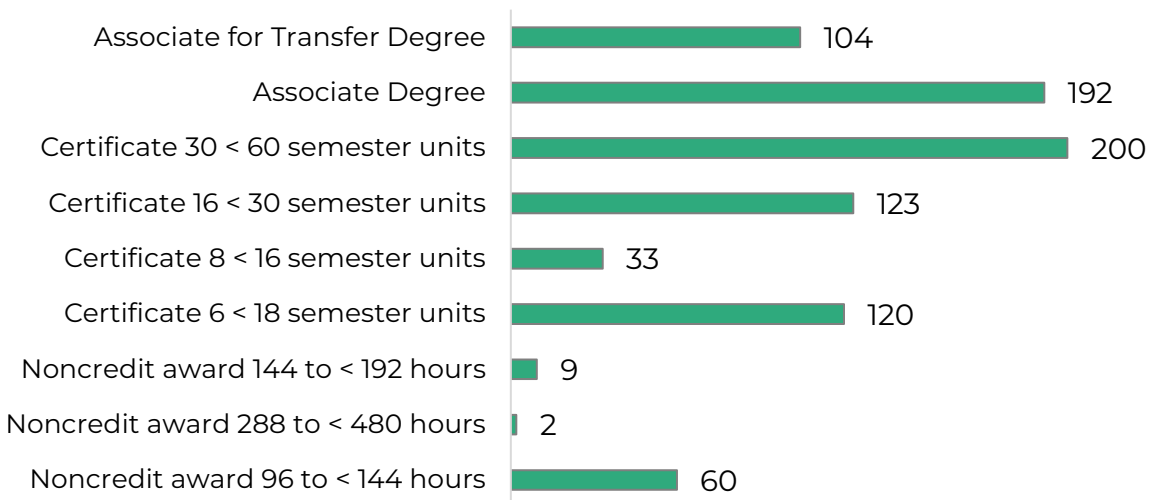
Exhibit 14: Regional Community College Awards (Certificates and Degrees), 2021-2024

TOP Code	Program	College	2021-2022 Awards	2022-2023 Awards	2023-2024 Awards	3-Year Award Average	
1306.00	Nutrition, Foods, and Culinary Arts	Citrus	6	2	3	4	
		East LA	21	16	15	17	
		Glendale	6	8	5	6	
		LA City	4	1	6	4	
		LA Harbor	3	1	2	2	
		LA Mission	4	7	7	6	
		LA Southwest	2	4	1	2	
		LA Trade	3	0	0	1	
		Long Beach	16	20	22	19	
		Mt San Antonio	25	29	20	25	
		Pasadena	3	1	6	3	
		Rio Hondo	1	1	3	2	
		Santa Monica	11	8	9	9	
		West LA	5	2	2	3	
		<b>LA Subtotal</b>		<b>110</b>	<b>100</b>	<b>101</b>	<b>104</b>
		Coastline	0	0	1	0	
		Cypress	3	0	2	2	
		Fullerton	13	12	8	11	
		Orange Coast	11	9	10	10	
		Saddleback	12	12	10	11	
Santa Ana	2	1	4	2			
Santiago Canyon	0	4	7	4			

TOP Code	Program	College	2021-2022 Awards	2022-2023 Awards	2023-2024 Awards	3-Year Award Average
		<b>OC Subtotal</b>	<b>41</b>	<b>38</b>	<b>42</b>	<b>40</b>
<b>Supply Subtotal/Average</b>			<b>151</b>	<b>138</b>	<b>143</b>	<b>144</b>
1306.30	Culinary Arts	Cerritos	54	55	51	53
		LA Harbor	83	49	72	68
		LA Mission	108	88	157	118
		LA Trade	132	136	142	137
		Long Beach	28	49	51	43
		Mt San Antonio	20	22	26	23
		Pasadena	1	5	9	5
		<b>LA Subtotal</b>	<b>426</b>	<b>404</b>	<b>508</b>	<b>446</b>
		Cypress	89	70	39	66
		Orange Coast	88	78	83	83
		Saddleback	18	33	31	27
		Santa Ana	5	21	23	16
		Santiago Canyon	128	35	16	60
		<b>OC Subtotal</b>	<b>328</b>	<b>237</b>	<b>192</b>	<b>252</b>
		<b>Supply Subtotal/Average</b>			<b>754</b>	<b>641</b>
<b>Supply Total/Average</b>			<b>905</b>	<b>779</b>	<b>843</b>	<b>842</b>

Exhibit 15 shows the annual average community college awards by type from 2021-22 to 2023-24. The plurality of the awards are for certificates between 30 and less than 60 semester units, followed by associate degrees and certificates between 16 and less than 30 semester units.

Exhibit 15: Annual Average Community College Awards by Type, 2021-2024



## Community College Student Outcomes:

Exhibit 16 shows the Strong Workforce Program (SWP) metrics for culinary arts programs in Rancho Santiago Community College District (RSCCD), the Orange County Region, and California. Of the 1,657 Orange County culinary arts students in the 2023-24 academic year, 52% (857) attended an RSCCD college.

RSCCD students that exited culinary arts programs in the 2022-23 academic year had higher median annual earnings (\$44,772 or \$21.53 per hour) compared to all culinary arts students in Orange County (\$39,092 or \$18.79 per hour). A higher percentage of RSCCD culinary arts students attained the living wage (32%) when compared to all culinary arts students in Orange County (25%).

Exhibit 16: Culinary Arts (1306.30) Strong Workforce Program Metrics, 2021-24<sup>4</sup>

SWP Metric	RSCCD	OC Region	California
SWP Students	857	1,657	11,618
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	Insufficient Data	23%	33%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	69%	69%	72%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	29	110	932
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2022-23)	Insufficient Data	24	182
SWP Students with a Job Closely Related to Their Field of Study (2021-22)	Insufficient Data	79%	62%
Median Annual Earnings for SWP Exiting Students (2022-23)	\$44,772 (\$21.53)	\$39,092 (\$18.79)	\$34,048 (\$16.37)
Median Change in Earnings for SWP Exiting Students (2022-23)	11%	19%	25%
SWP Exiting Students Who Attained the Living Wage (2022-23)	32%	25%	27%

## Non-Community College Supply:

To comprehensively analyze the regional supply, it is crucial to include data from other institutions offering culinary arts programs. Exhibit 17 displays the annual and three-year average awards granted by these institutions under the related Classification of Instructional Programs (CIP) codes:

- Baking and Pastry Arts/Baker/Pastry Chef (12.0501)

There were no non-community college awards conferred for the following related CIP codes:

- Cooking and Related Culinary Arts, General (12.0500)
- Culinary Arts/Chef Training (12.0503)

<sup>4</sup> All SWP metrics are for 2023-24 unless otherwise noted.

The available data covers 2020 to 2023. During this period, non-community college institutions in the region conferred an average of 68 awards annually in related program.

Exhibit 17: Regional Non-Community College Awards, 2020-2023

CIP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
12.0501	Baking and Pastry Arts/Baker/Pastry Chef	Institute of Culinary Education	52	72	77	67
		University of Antelope Valley	3	0	0	1
<b>Supply Subtotal/Average</b>			<b>55</b>	<b>72</b>	<b>77</b>	<b>68</b>
<b>Supply Total/Average</b>			<b>55</b>	<b>72</b>	<b>77</b>	<b>68</b>

## Regional Demographics

This section examines demographic data for Orange County community college students in culinary arts programs compared to the OC population, along with occupational data, to identify potential diversity and equity issues addressable by community college programs.

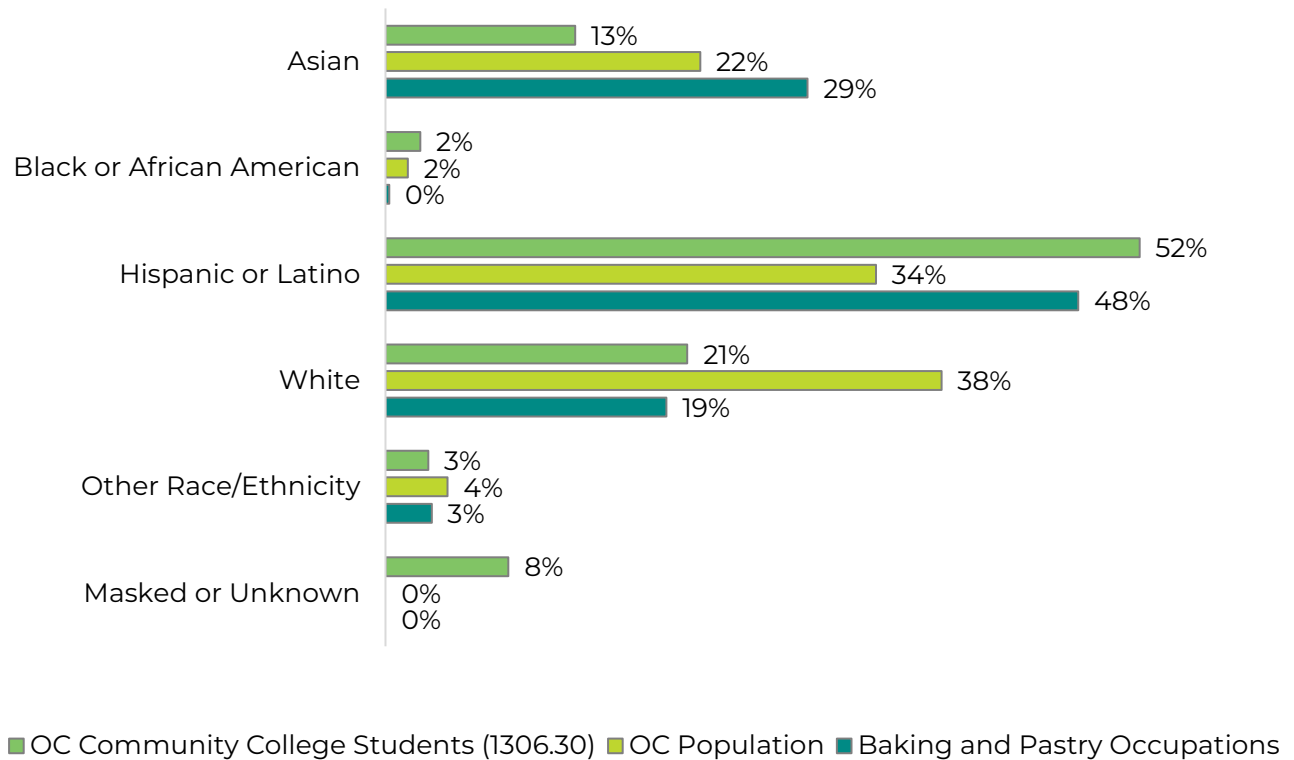
### Ethnicity:

Exhibit 18 compares the ethnicity of Orange County community college students enrolled in culinary arts programs, the overall Orange County population, and occupation-specific data for the four baking and pastry occupations included in this report.

Notably, 29% of workers employed in these baking and pastry occupations are Asian, which is much higher than the population (22%) and community college culinary arts students (13%).

Examining disaggregated data for each occupation (not shown), there is a higher percentage of Hispanic or Latino workers in the lower wage, below middle skill-occupation *bakers\** (54%) compared to the middle-skill occupation *chefs and head cooks*. Conversely, Asian workers make up a higher proportion of *chefs and head cooks* (34%) compared to their representation of *bakers\** (19%).

Exhibit 18: Program and County Demographics by Ethnicity



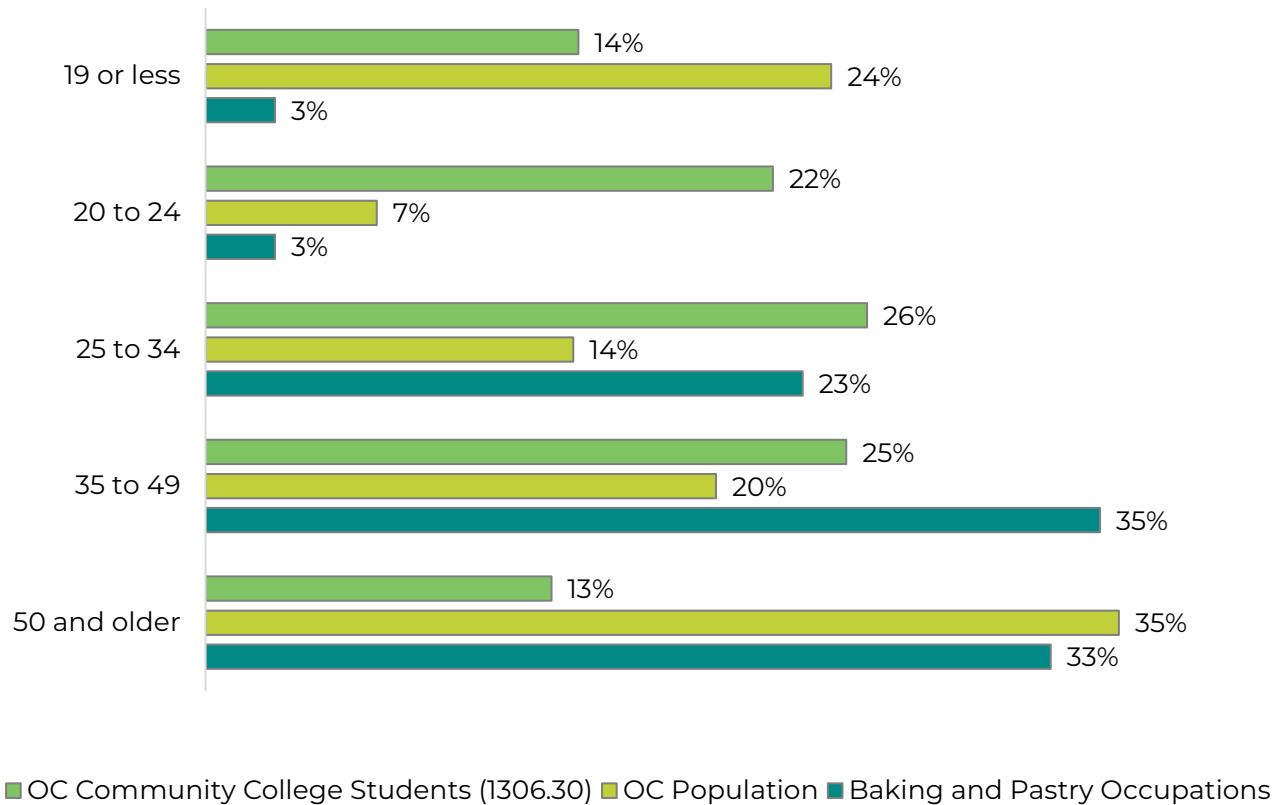
## Age:

Exhibit 19 compares the age of Orange County community college students enrolled in culinary arts programs, the overall Orange County population, and occupation-specific data for the four baking and pastry occupations included in this report.

Nearly 3% of workers in these baking and pastry occupations are age 20 to 24, which is lower than the population (7%) and significantly higher than community college culinary arts students (22%).

Examining disaggregated data for each occupation (not shown), the occupation with the highest percentage of workers age 34 or younger is *bakers\** (39%), which has the lowest entry-level wages of the two baking and pastry occupations. Conversely, the occupation with the highest percentage of workers age 35 and older is *chefs and head cooks* (70%). This occupation also has the highest entry-level education requirements and has the highest entry-level wages of the two baking and pastry occupations.

Exhibit 19: Program and County Demographics by Age



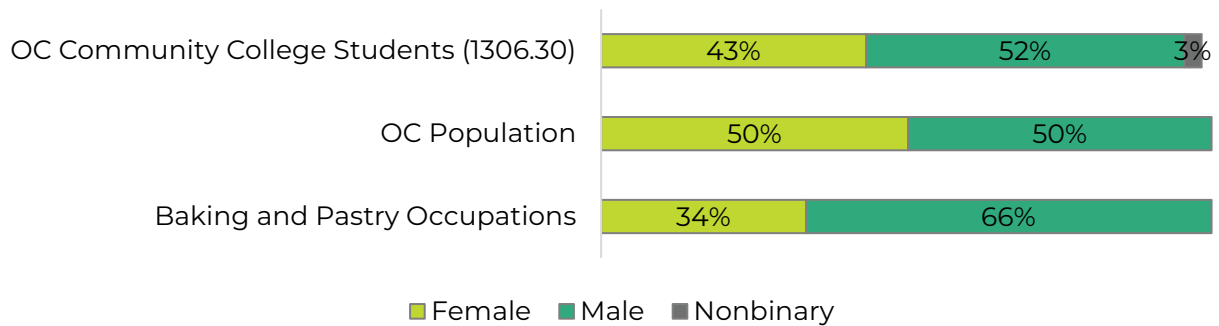
## Sex:

Exhibit 20 compares the sex of Orange County community college students enrolled in culinary arts programs, the overall Orange County population, and occupation-specific data for these baking and pastry occupations.

Though the population is split evenly between women and male, only 43% of community college culinary arts students and 34% of workers in the field are female.

Examining disaggregated data for each occupation (not shown), it is important to note that female individuals are far underrepresented in one occupation, *chefs and head cooks*, which has a significantly larger percentage of men (77%) than women (23%). This occupation also has the highest entry-level education requirements and the highest entry-level wages of the two baking and pastry occupations.

Exhibit 20: Program and County Demographics by Sex



## Appendix A: Methodology

OC COE prepared this report by analyzing occupational and educational program data. Occupational data comes from Lightcast, a labor market analytics firm which compiles information from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS), and other agencies. Analysis of emerging occupations is predicated on online job postings data combined with Occupational Information Network (O\*NET) profile descriptions. Program supply data was sourced from the California Community Colleges Chancellor's Office Data Mart (MIS Data Mart) ([datamart.cccco.edu](http://datamart.cccco.edu)) and the Integrated Postsecondary Education Data System ([nces.ed.gov/ipeds/use-the-data](http://nces.ed.gov/ipeds/use-the-data)), also known as IPEDS, which was integrated into the COE's Supply Table. (IPEDS).

Using a TOP-SOC crosswalk, the OC COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

The OC COE determined labor market supply for each occupation (SOC code) by analyzing the number of 3-year average program completers or awards in related TOP and CIP codes. TOP code data comes from MIS Data Mart and CIP code data comes from the IPEDS. The TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education throughout the United States and Canada. The California Community Colleges are the only system that use TOP codes.

The analysis reflects labor market demand for occupations closely related to the proposed program as expressed by the requesting college in consultation with the OC COE. assess current and projected employment based on data trends for detailed occupations, as well as annual average awards granted by regional postsecondary educational institutions. Real-time labor market information (online job postings) assesses employer preferences but cannot be used to measure the quantity of open positions, number of jobs, or annual openings.

All findings are based on the most current available data and a combination of primary and secondary sources. While care was taken to ensure accuracy, the OC COE, its host district, and the California Community Colleges Chancellor's Office are not responsible for individual decisions made based on this report.

## Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	Traditional and real-time labor market information are captured using data from <a href="#">Lightcast</a> , a labor market analytics firm.
Living Wage	<p>Per the CCCCCO's this report's endorsement criteria uses the <a href="#">University of Washington's Center for Women's Welfare Self-Sufficiency Standard</a> last updated in March 2024, which is \$27.13 per hour (\$57,294 annually) in Orange County.</p> <p>The <a href="#">MIT Living Wage</a>, updated on February 10, 2025, is a nationally recognized living wage metric and is provided for reference. The current MIT Living Wage in Orange County is \$32.20.</p>
Typical Education and Training Requirements, and Educational Attainment	The <a href="#">Bureau of Labor Statistics (BLS)</a> 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.
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	The <a href="#">O*NET</a> database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations.
Educational Supply	<p>The <a href="#">CCCCO Data Mart</a> provides information about students, courses, student services, outcomes and faculty and staff.</p> <p>The <a href="#">National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS)</a> collects data on the number of postsecondary awards earned (completions).</p>
Student Metrics and Demographics	<a href="#">Data Vista</a> , a statewide data system supported by the California Community Colleges Chancellor's Office provides data on progress, success, employment, and earnings outcomes for California community college students.
Population and Occupation Demographics	<p>The <a href="#">Census Bureau's American Community Survey (ACS)</a> is the premier source for detailed population and housing information.</p> <p>Data is sourced from <a href="#">IPUMS USA</a>, a database providing access to ACS and other Census Bureau data products.</p>

For more information, please contact the Orange County Center of Excellence:

**Jesse Crete, Ed. D., Regional Director**

crete\_jesse@rscdd.edu

**Danielle O. Alarid, Interim Director of Special Programs**

alarid\_danielle@rscdd.edu

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ORANGE COUNTY