

Labor Market Analysis for Program Recommendation:  
 0502.00/Accounting  
 (Certificate in Data Analytics for Business and  
 Accounting Majors)



Orange County Center of Excellence, September 2024

Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some LMI Criteria Met <input type="checkbox"/>	Not LMI Endorsed <input type="checkbox"/>
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Program LMI Endorsement Criteria

	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Supply Gap:	Comments: there is projected to be <b>7,955 annual job openings</b> throughout Los Angeles and Orange counties for <i>bookkeeping, accounting, and auditing clerks</i> , which is <b>more than the 1,879 awards conferred by educational institutions</b> .	
CA Insight Living Wage: (Entry-Level, 25 <sup>th</sup> ) <sup>1</sup>	Comments: <b>entry-level hourly wages</b> for <i>bookkeeping, accounting, and auditing clerks</i> are \$21.40, which is <b>above the OC living wage of \$20.63</b> .	
Education:	Comments: The typical entry level education for <i>bookkeeping, accounting, and auditing clerks</i> is <b>some college, no degree and approximately 49% of workers in the field have completed some college or an associate degree as their highest level of education</b> .	

Additional Considerations

	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Emerging Occupation(s):	Comments: N/A	
OC Resilient Job(s):	Comments: See <a href="#">Resilient Jobs and US News &amp; World Report Best Jobs</a>	
U.S. News & World Report 2024 Best Jobs List <sup>2</sup> :	Comments: See <a href="#">Resilient Jobs and US News &amp; World Report Best Jobs</a>	

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 four accounting occupations:

- Middle-Skill
  - *Bookkeeping, Accounting, and Auditing Clerks (43-3031)*

<sup>1</sup> The living wage endorsement criteria in this report uses the California Insight Center’s living wage of \$20.63 for Orange County, last updated in September 2021, as currently employed by the Chancellor’s Office for the *Students Who Attained the Living Wage Strong Workforce Program* metric.

<sup>2</sup> "100 Best Jobs of 2024," U.S. News & World Report, accessed May 7, 2024, <https://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs>.

- Above Middle-Skill – denoted with a caret (^) throughout this report.
  - *Accountants and Auditors (13-2011)*<sup>^</sup>
  - *Budget Analysts (13-2031)*<sup>^</sup>
  - *Financial and Investment Analysts (13-2051)*<sup>^</sup>

Based on the available data there appears to be a supply gap for *bookkeeping, accounting, and auditing clerks*, the sole middle-skill occupation analyzed in this report. Additionally, entry-level wages for this occupation are above the California Insight living wage and typical education requirements align with community college education. **Therefore, due to all 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 (25 <sup>th</sup> Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Bookkeeping, Accounting, and Auditing Clerks (43-3031)	LA: 5,656 OC: 2,299	LA: 1,090 OC: 789	OC: \$21.40	Some college, no degree	49%
<b>Middle-Skill Total</b>	<b>7,955</b>	<b>1,879</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Accountants and Auditors (13-2011) <sup>^</sup>	LA: 4,270 OC: 1,758 TTL: 6,028	LA: 646 OC: 102 TTL: 748	OC: \$32.35	Bachelor's degree	14%
Budget Analysts (13-2031) <sup>^</sup>	LA: 88 OC: 30 TTL: 118	LA: 533 OC: 4 TTL: 538	OC: \$37.41	Bachelor's degree	16%
Financial and Investment Analysts (13-2051) <sup>^</sup>	LA: 632 OC: 267 TTL: 899	<i>Accounted for Above</i>	OC: \$37.01	Bachelor's degree	12%
<b>Above Middle-Skill Total</b>	<b>7,044</b>	<b>1,286</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Total</b>	<b>14,999</b>	<b>3,165</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

### Demand:

- The number of jobs related to *bookkeeping, accounting, and auditing clerks* is projected to decline 1% through 2028, equating to 7,955 annual job openings due to retirements and replacements.
- Hourly entry-level wages for *bookkeeping, accounting, and auditing clerks* are \$21.40, which is above the California Insight living wage.
- There were 30,202 online job postings for these four accounting occupations in the past 12 months. Of those, 41 (12,372) were for *bookkeeping, accounting, and auditing clerks*.

- Of the 30,202 total postings, 5% (1,644) requested data analytics skills. The highest number of postings were for financial analysts, accountants, and financial planning and analysis analysts.
- The typical entry-level education for *bookkeeping, accounting, and auditing clerks* is some college, no degree.
- Approximately 49% of *bookkeeping, accounting, and auditing clerks* have completed some college or an associate degree as their highest level of educational attainment.

## Supply:

- There was an average of 2,012 awards conferred by all 28 community college institutions in Los Angeles and Orange Counties from 2020 to 2023.
- Non-community college institutions conferred an average of 1,584 awards from 2019 to 2022. Of those, 98% (1,558) were for the above middle-skill occupations.
- Orange County community college students that exited accounting programs in the 2020-21 academic year had a median annual wage of \$49,430 (\$23.76 per hour) after exiting the program and 58% attained the regional living wage (California Insight).
- Throughout Orange County, 68% of accounting students that exited their program in 2019-20 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 all four of the accounting occupations researched in this report from 2018 through 2028. Employment in these accounting occupations declined 3% in Orange County from 2019 to 2020, which is lower than the 7% decline across all occupations in Los Angeles and Orange counties due to the COVID-19 pandemic.

In the two years preceding the pandemic, employment for these occupations declined in Orange County, with a 1% decrease in 2018 and a 2% decrease in 2019. After a 3% decrease in employment in 2020 and an increase through 2023, employment for these four occupations increased slightly each year through 2023 in Orange County. Employment is projected to remain flat through 2028, experiencing a lower rate relative to all occupations in Los Angeles and Orange counties.

Notably, employment for *bookkeeping, accounting, and auditing clerks*, the sole middle-skill occupation analyzed in this report, is projected to decline through 2028 while employment for the three above middle-skill occupations is projected to increase.

## Exhibit 2: Annual Percent Change in Jobs for Accounting Occupations, 2018-2028

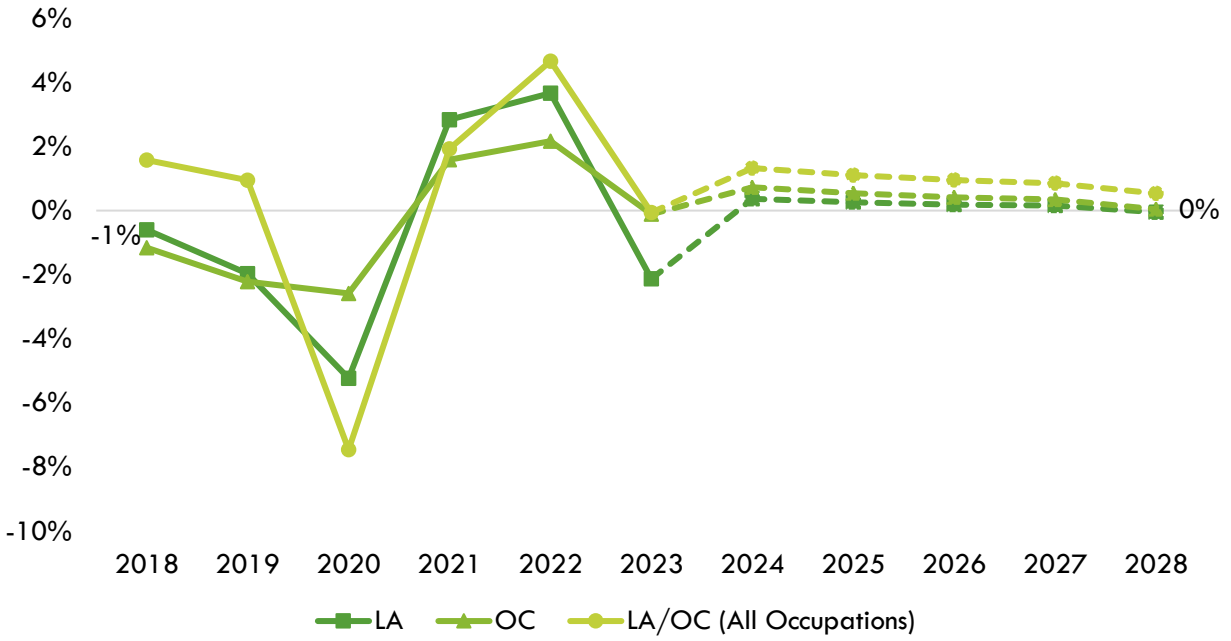


Exhibit 3 shows the five-year occupational demand projections for *bookkeeping, accounting, and auditing clerks*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to decrease by 1% through 2028. There is projected to be 7,955 jobs available annually due to retirements and replacements.

### Exhibit 3: Occupational Demand in Los Angeles and Orange Counties<sup>3</sup>

Geography	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
Los Angeles	48,960	48,291	(669)	(1%)	5,656
Orange	19,606	19,562	(43)	(0.2%)	2,299
<b>Total</b>	<b>68,565</b>	<b>67,853</b>	<b>(712)</b>	<b>(1%)</b>	<b>7,955</b>

Exhibit 4 shows the five-year occupational demand projections for these above middle-skill accounting occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 3% through 2028. There is projected to be 7,044 jobs available annually.

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

Geography	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
Los Angeles	61,649	63,335	1,686	3%	4,989
Orange	24,560	25,524	965	4%	2,055
<b>Total</b>	<b>86,209</b>	<b>88,860</b>	<b>2,651</b>	<b>3%</b>	<b>7,044</b>

<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.

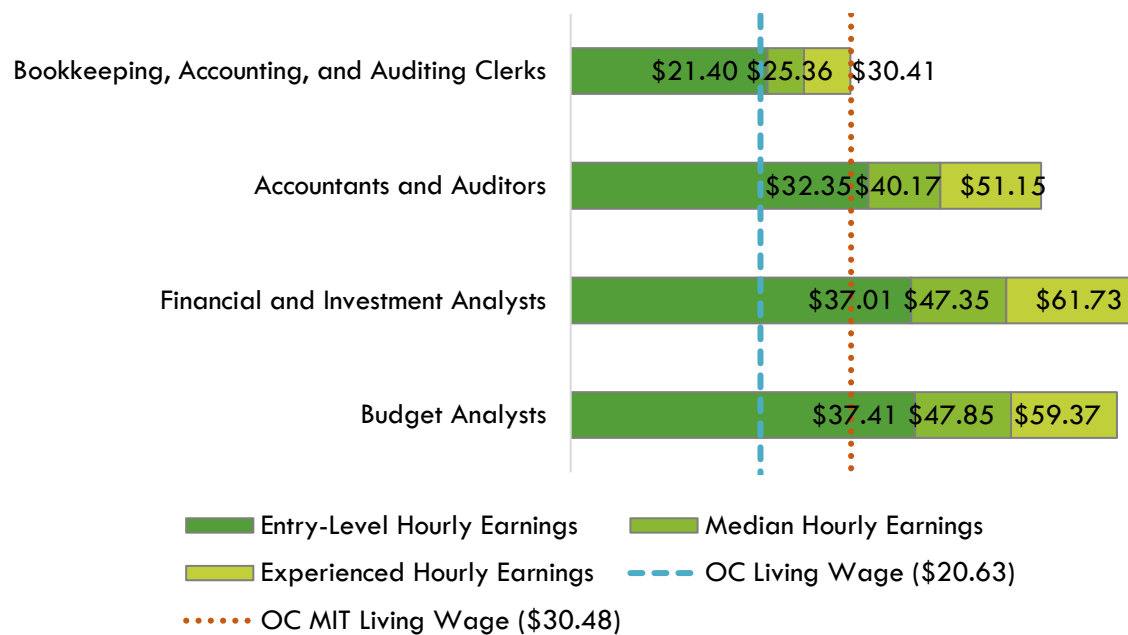
## Wages:

The labor market endorsement in this report considers the entry-level hourly wages for these accounting 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.

It is important to note that the living wage endorsement criteria in this report uses the California Insight Center's living wage of \$20.63 for Orange County, last updated in September 2021, as currently employed by the Chancellor's Office for the *Students Who Attained the Living Wage Strong Workforce Program* metric. However, this figure is outdated and does not reflect recent increases in the cost of living. The MIT Living Wage, updated on February 14, 2024, better accounts for existing economic conditions, with the current MIT Living Wage in Orange County being \$30.48. Both figures are notated in the exhibits below.

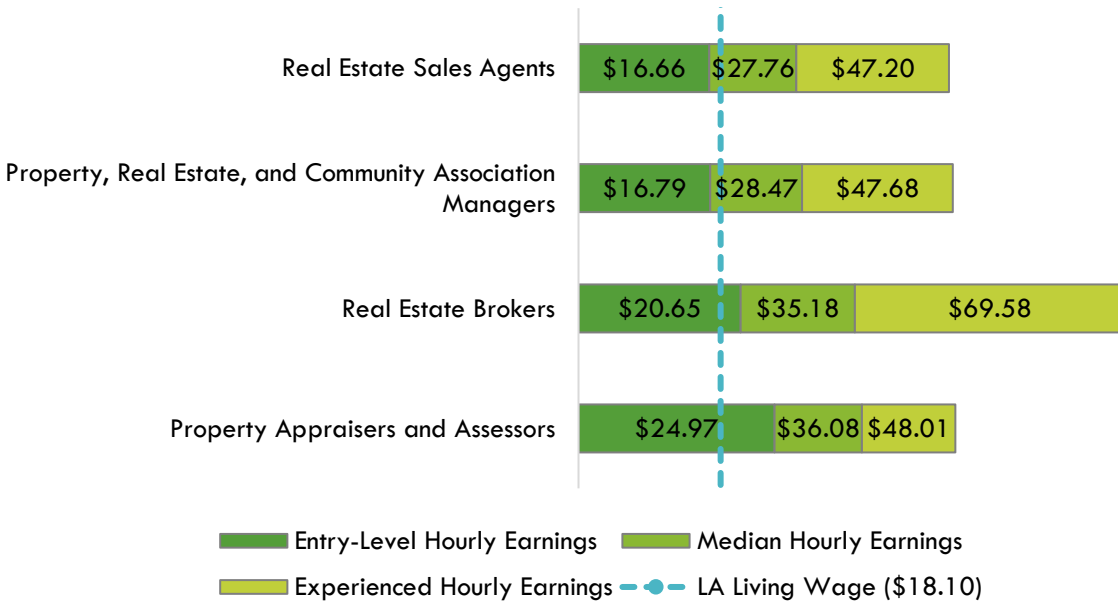
Typical entry-level wages for *bookkeeping, accounting, and auditing clerks*, the sole middle-skill occupation analyzed in this report, are \$21.40, which is above the California Insight living wage for one adult (\$20.63 in Orange County). Orange County's average wages for this occupation \$27.23 are similar to the average statewide wage of \$27.82 for this occupation. Exhibit 5 shows the wage range for each of these accounting occupations in Orange County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

### Exhibit 5: Wages by Occupation in Orange County



Typical entry-level wages for *bookkeeping, accounting, and auditing clerks*, the sole middle-skill occupation analyzed in this report, are \$21.39, which is above the California Insight living wage for one adult (\$18.10 in Los Angeles County). Los Angeles County's average wages (\$27.32) are similar to the average statewide wage of \$27.82 for this occupation. Exhibit 6 shows the wage range for each of these accounting 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 2024 U.S. News & World Report (USN&WR) Best Job. No occupations met the criteria to be considered a Great Recession -Resilient or COVID-19 Pandemic Recession-Resilient Job. Only accountants and auditors<sup>^</sup> is considered a 2024 USN&WR Best Job.

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

Occupation	Great Recession-Resilient Job	COVID-19 Pandemic Recession-Resilient Job	2024 USN&WR Best Job
<b>Middle-Skill</b>			
Bookkeeping, Accounting, and Auditing Clerks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Above Middle-Skill</b>			
Accountants and Auditors <sup>^</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Budget Analysts <sup>^</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial and Investment Analysts <sup>^</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Job Postings:

**Important Online Job Postings Data Note:** Online job postings data is sourced from Lightcast, a labor market analytics firm that scrapes, collects, and organizes data from online job boards such as LinkedIn, Indeed, Glassdoor, Monster, GovernmentJobs.com, and thousands more. Lightcast uses natural language processing (NLP) to determine the related company, industry, occupation, and other information for each job posting. However, NLP has limitations that include understanding contextual words of phrases; determining differences

in words that can be used as nouns, verbs, and/or adjectives; and misspellings or grammatical errors.<sup>4</sup> For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast's database.

Additionally, there are several limitations when analyzing job postings. A single job posting may not represent a single job opening, as employers may be creating a pool of candidates for future openings or hiring for multiple positions with a single posting. Additionally, not all jobs are posted online, and jobs may be filled through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

There were 30,200 online job postings related to these accounting occupations listed in the past 12 months. Of those, 59% (17,830) were for the above middle-skill occupations and 41% (12,372) were for bookkeeping, accounting, and auditing clerks. Of the 30,202 total postings, 5% (1,644) requested data analytics skills. Exhibit 8 shows the number of job postings by occupation.

The remainder of this section includes data on employers and skills for *bookkeeping, accounting, and auditing clerks*, the sole middle-skill occupation, the three middle-skill occupations, and for postings that requested data analytics skills.

**Exhibit 8: Number of Job Postings by Occupation (n=30,202)**

Occupation	Job Postings	Percentage of Job Postings
Bookkeeping, Accounting, and Auditing Clerks	12,372	41%
Accountants and Auditors	10,930	36%
Financial and Investment Analysts	6,607	22%
Budget Analysts	293	1%
<b>Total Postings</b>	<b>30,202</b>	<b>100%</b>

The top employers for *bookkeeping, accounting, and auditing clerks*, in the region, by number of job postings, are shown in Exhibit 9.

**Exhibit 9: Top Middle-Skill Employers by Number of Job Postings (n=12,372)**

Employer	Job Postings	Percentage of Job Postings
Robert Half	995	8%
AppleOne	469	4%
Aston Carter	299	2%
Vaco	161	1%
Advantex Professional Services	146	1%
Ledgent	144	1%
Randstad	104	1%
Cv Resources	86	1%
Express Employment Professionals	55	0%
Lee Hecht Harrison	55	0%

The top employers for the above middle-skill accounting occupations in the region, by number of job postings, are shown in Exhibit 10.

<sup>4</sup> K. R. Chowdhary, *Fundamentals of Artificial Intelligence* (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

**Exhibit 10: Top Above Middle-Skill Employers  
by Number of Job Postings (n=17,830)**

Employer	Job Postings	Percentage of Job Postings
Robert Half	980	6%
Jobot	316	2%
Vaco	293	2%
University of California	266	2%
Aston Carter	174	1%
Randstad	141	1%
AppleOne	126	1%
CyberCoders	124	1%
Intuit	117	1%
Disney	108	1%

The top employers for these occupations that requested data analytics skills, in the region, by number of job postings, are shown in Exhibit 11.

**Exhibit 11: Top Data Analytics for Business and Accounting Employers  
by Number of Job Postings (n=1,644)**

Employer	Job Postings	Percentage of Job Postings
Robert Half	82	5%
Wahve Holdings	57	3%
Kaiser Permanente	46	3%
Royal Bank of Canada	38	2%
University of California	27	2%
University of Southern California	20	1%
Vaco	17	1%
Karl Storz	16	1%
Athens Services	15	1%
Jobot	14	1%

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

**Exhibit 12: Top Skills for Middle-Skill Occupations  
by Number of Job Postings (n=12,372)**

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Accounting (8,206)	Detail Oriented (5,393)	Microsoft Excel (3,898)
Accounts Payable (7,303)	Communication (4,563)	Accounting Software (2,875)
Invoicing (6,945)	Microsoft Excel (3,898)	QuickBooks (Accounting Software) (2,869)
Accounts Receivable (5,403)	Management (2,577)	Microsoft Office (2,125)
Bookkeeping (4,556)	Organizational Skills (2,192)	Microsoft Outlook (1,287)



Top Specialized Skills	Top Soft Skills	Top Computer Skills
Financial Statements (3,351)	Collections (2,187)	Spreadsheets (941)
Accounting Software (2,875)	Microsoft Office (2,125)	Microsoft Word (688)
QuickBooks (Accounting Software) (2,869)	Filing (1,993)	SAP Applications (599)
Finance (2,794)	Customer Service (1,974)	Microsoft PowerPoint (424)
Data Entry (2,721)	Problem Solving (1,863)	Yardi (Property Management Software) (227)

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown for these above middle-skill occupations in Exhibit 13.

### Exhibit 13: Top Skills for Above Middle-Skill Occupations by Number of Job Postings (n=17,830)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Accounting (13,054)	Communication (7,333)	Microsoft Excel (6,018)
Finance (8,476)	Management (7,201)	Microsoft Office (2,974)
Financial Statements (7,077)	Microsoft Excel (6,018)	Microsoft PowerPoint (1,990)
Auditing (6,633)	Detail Oriented (5,625)	Accounting Software (1,934)
Financial Analysis (4,662)	Budgeting (3,957)	QuickBooks (Accounting Software) (1,445)
Generally Accepted Accounting Principles (4,148)	Operations (3,900)	Microsoft Outlook (1,352)
General Ledger (3,070)	Problem Solving (3,774)	SAP Applications (1,289)
Accounts Payable (3,063)	Forecasting (3,356)	Spreadsheets (1,062)
Accounts Receivable (2,816)	Research (3,153)	Microsoft Word (842)
Month-End Closing (2,636)	Microsoft Office (2,974)	SQL (Programming Language) (605)

The top employers for these occupations that requested data analytics skills, in the region, by number of job postings, are shown in Exhibit 14.

### Exhibit 14: Top Data Analytics for Business and Accounting Skills by Number of Job Postings (n=1,644)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Data Analysis (1,614)	Communication (906)	Microsoft Excel (725)
Accounting (1,079)	Management (851)	Microsoft Office (322)
Finance (934)	Microsoft Excel (725)	Microsoft PowerPoint (276)
Auditing (697)	Detail Oriented (649)	Tableau (200)

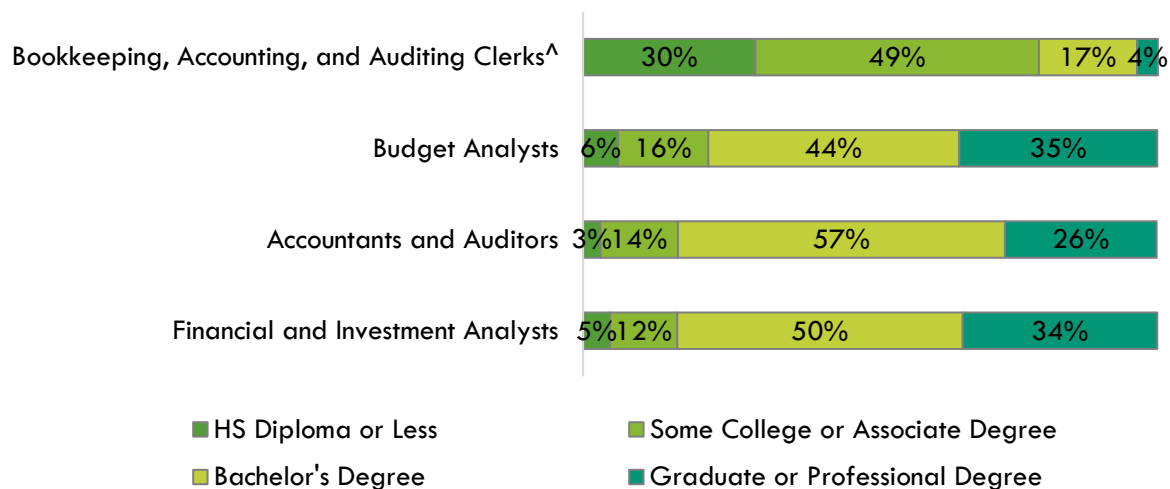
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Financial Statements (620)	Problem Solving (589)	SQL (Programming Language) (195)
Financial Analysis (549)	Operations (523)	Spreadsheets (171)
Invoicing (302)	Forecasting (465)	SAP Applications (168)
Generally Accepted Accounting Principles (300)	Research (462)	Accounting Software (165)
Financial Modeling (295)	Budgeting (421)	Dashboard (134)
Accounts Payable (261)	Leadership (417)	Power BI (115)

## Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for *bookkeeping, accounting, and auditing clerks* and a bachelor's degree for the three above middle-skill occupations. The national-level educational attainment data indicates 49% of *bookkeeping, accounting, and auditing clerks* have completed some college or an associate degree as their highest level of education. Between 12% and 16% of workers in the above middle-skill occupations have completed some college or an associate degree as their highest level of education.

Exhibit 15 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

### Exhibit 15: National-level Educational Attainment for Occupations



Of the 52% of the cumulative job postings for *bookkeeping, accounting, and auditing clerks* that listed a minimum education requirement in Los Angeles/Orange County, 56% (3,572) requested a high school diploma or an associate degree and 43% (2,746) requested a bachelor's degree.

Conversely, of the 77% of the postings for these above middle-skill accounting occupations that listed a minimum education requirement, 87% (11,959) requested a bachelor's degree and 11% (1,470) requested a high school diploma or an associate degree.

Additionally, of the 82% of the postings that requested data analytics skills, 89% (1,211) requested a bachelor's, master's, or doctoral degree, and 11% requested a high school diploma or an associate degree.

# Educational Supply

## Community College Supply:

Exhibit 16 shows the three-year average number of awards conferred by community colleges in the related TOP codes:

- Accounting (0502.00)
- Tax Studies (0502.10)
- Banking and Finance (0504.00)

The colleges with the most completions in the region are Irvine Valley, East LA, and Santa Monica. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

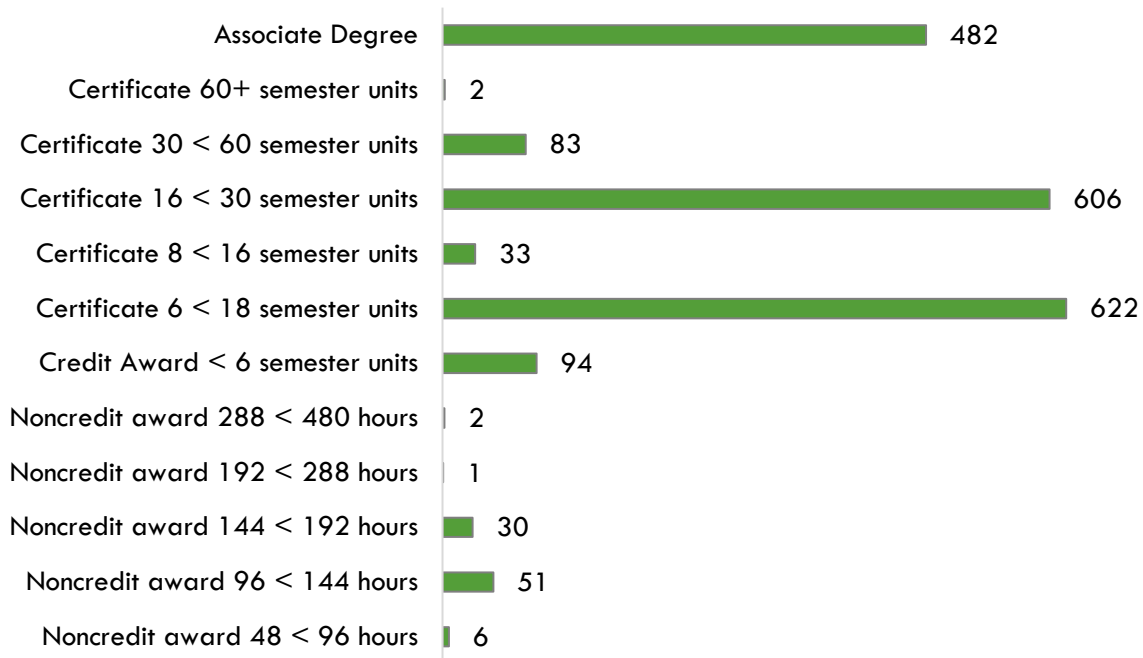
### Exhibit 16: Regional Community College Awards (Certificates and Degrees), 2020-2023

TOP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average		
0502.00	Accounting	Cerritos	22	37	21	27		
		Citrus	22	16	17	18		
		East LA	335	215	127	226		
		El Camino	15	20	20	18		
		Glendale	79	86	79	81		
		LA City	16	19	18	18		
		LA Harbor	33	27	35	32		
		LA Mission	33	24	9	22		
		LA Pierce	35	26	52	38		
		LA Southwest	2	1	1	1		
		LA Trade	10	14	10	11		
		LA Valley	51	55	54	53		
		Long Beach	49	56	48	51		
		Mt San Antonio	186	194	187	189		
		Pasadena	23	47	30	33		
		Rio Hondo	30	31	21	27		
		Santa Monica	195	231	187	204		
		West LA	16	18	6	13		
		<b>LA Subtotal</b>			<b>1,152</b>	<b>1,117</b>	<b>922</b>	<b>1,064</b>
				Coastline	51	48	44	48
				Cypress	3	8	9	7
				Fullerton	25	17	24	22
				Golden West	30	23	20	24
				Irvine	208	486	342	345
				North Orange Adult	0	8	14	7

TOP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
		Orange Coast	94	92	33	73
		Saddleback	19	55	37	37
		Santa Ana	104	140	126	123
		Santiago Canyon	46	52	209	102
		<b>OC Subtotal</b>	<b>580</b>	<b>929</b>	<b>858</b>	<b>789</b>
		<b>Supply Subtotal/Average</b>	<b>1,732</b>	<b>2,046</b>	<b>1,780</b>	<b>1,853</b>
0502.10	Tax Studies	East LA	2	2	0	1
		Glendale	2	0	0	1
		LA City	3	6	3	4
		LA Pierce	18	11	38	22
		Mt San Antonio	5	12	14	10
		Santa Monica	3	1	0	1
		<b>LA Subtotal</b>	<b>33</b>	<b>32</b>	<b>55</b>	<b>40</b>
		Irvine	11	42	43	32
		Orange Coast	16	15	2	11
		Saddleback	5	7	4	5
		<b>OC Subtotal</b>	<b>32</b>	<b>64</b>	<b>49</b>	<b>48</b>
		<b>Supply Subtotal/Average</b>	<b>65</b>	<b>96</b>	<b>104</b>	<b>88</b>
0504.00	Banking and Finance	Glendale	3	3	14	7
		LA City	12	7	8	9
		LA Pierce	9	3	4	5
		LA Southwest	0	0	3	1
		LA Valley	36	40	34	37
		Long Beach	3	1	5	3
		Pasadena	2	5	7	5
		Rio Hondo	0	0	1	0
		<b>LA Subtotal</b>	<b>367</b>	<b>303</b>	<b>422</b>	<b>365</b>
		Santa Ana	0	1	0	0
		Santiago Canyon	0	0	12	4
		<b>OC Subtotal</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>4</b>
		<b>Supply Subtotal/Average</b>	<b>65</b>	<b>60</b>	<b>88</b>	<b>71</b>
		<b>Supply Total/Average</b>	<b>1,862</b>	<b>2,202</b>	<b>1,972</b>	<b>2,012</b>

Exhibit 17 shows the annual average community college awards by type from 2020-21 to 2022-23. The plurality of the awards are for certificates between 6 and less than 18 semester units, followed by certificates between 16 and less than 30 semester units and associate degrees.

### Exhibit 17: Annual Average Community College Awards by Type, 2020-2023



### Community College Student Outcomes:

Exhibit 18 shows the Strong Workforce Program (SWP) metrics for accounting programs in Rancho Santiago Community College District (RSCCD), the Orange County Region, and California. Of the 2,342 accounting students in the 2020-21 academic year, 43% (1,000) attended an SOCCCD college.

Additionally, RSCCD had a higher percentage of students with a job closely related to their field of study (79%) compared to Orange County (68%) and statewide (71%). However, median annual earnings after exiting were lower for RSCCD students (\$43,864 or \$21.09 per hour) than Orange County (\$49,430 or \$23.76 per hour) and statewide (\$47,656 or \$22.91 per hour).

### Exhibit 18: Accounting (0502.00) Strong Workforce Program Metrics, 2021-22<sup>5</sup>

SWP Metric	RSCCD	OC Region	California
SWP Students	2,096	10,623	86,742
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	30%	31%	36%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	85%	62%	77%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	83	319	3,036
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	199	1,699	14,003

<sup>5</sup> All SWP metrics are for 2020-21 unless otherwise noted.

SWP Metric	RSCCD	OC Region	California
SWP Students with a Job Closely Related to Their Field of Study (2019-20)	79%	68%	71%
Median Annual Earnings for SWP Exiting Students (2020-21)	\$43,864 (21.09)	\$49,430 (\$23.76)	\$47,656 (\$22.91)
Median Change in Earnings for SWP Exiting Students (2020-21)	30%	29%	27%
SWP Exiting Students Who Attained the Living Wage (2020-21)	51%	58%	63%

## Non-Community College Supply:

To comprehensively analyze the regional supply, it is crucial to include data from other institutions offering accounting training programs. Exhibit 19 displays the annual and three-year average awards granted by these institutions under the related Classification of Instructional Programs (CIP) codes:

- Accounting (52.0301)
- Accounting Technology/Technician and Bookkeeping (52.0302)
- Finance, General (52.0801)

No awards were conferred under the following CIP code:

- Taxation (52.1601)

The available data covers 2019 to 2022. During this period, non-community college institutions in the region conferred an average of 1,153 awards annually in related programs.

### Exhibit 19: Regional Non-Community College Awards, 2019-2022

CIP Code	Program	College	2019- 2020 Awards	2020- 2021 Awards	2021- 2022 Awards	3-Year Award Average
52.0301	Accounting	Abraham Lincoln University	1	0	0	0
		Azusa Pacific University	32	21	22	25
		Biola University	17	21	17	18
		California State University-Northridge	271	264	246	260
		Chapman University	58	34	47	46
		Claremont McKenna College	5	11	4	7
		Los Angeles Pacific College	7	2	3	4
		Loyola Marymount University	43	44	35	41
		Marymount California University	3	2	2	2
		Mount Saint Mary's University	18	17	9	15

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
		Pepperdine University	16	14	15	15
		Pitzer College	0	0	1	0
		Scripps College	2	0	1	1
		University of La Verne	38	32	20	30
		University of Southern California	189	175	160	175
		Vanguard University of Southern California	7	9	7	8
		Woodbury University	13	12	13	13
<b>Supply Subtotal/Average</b>			<b>720</b>	<b>658</b>	<b>602</b>	<b>660</b>
52.0302	Accounting Technology/ Technician and Bookkeeping	ABC Adult School	21	21	7	16
		Hacienda La Puente Adult Education	10	0	0	3
		InterCoast Colleges- West Covina	0	1	1	1
		Los Angeles Pacific College	4	4	1	3
		Premiere Career College	4	1	3	3
<b>Supply Subtotal/Average</b>			<b>170</b>	<b>168</b>	<b>136</b>	<b>158</b>
52.0801	Finance, General	California State University- Northridge	379	382	256	339
		Loyola Marymount University	105	117	114	112
		Pepperdine University	13	26	8	16
		Westcliff University	0	0	0	0
<b>Supply Subtotal/Average</b>			<b>497</b>	<b>525</b>	<b>378</b>	<b>467</b>
<b>Supply Total/Average</b>			<b>1,256</b>	<b>1,210</b>	<b>992</b>	<b>1,153</b>

## Regional Demographics

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

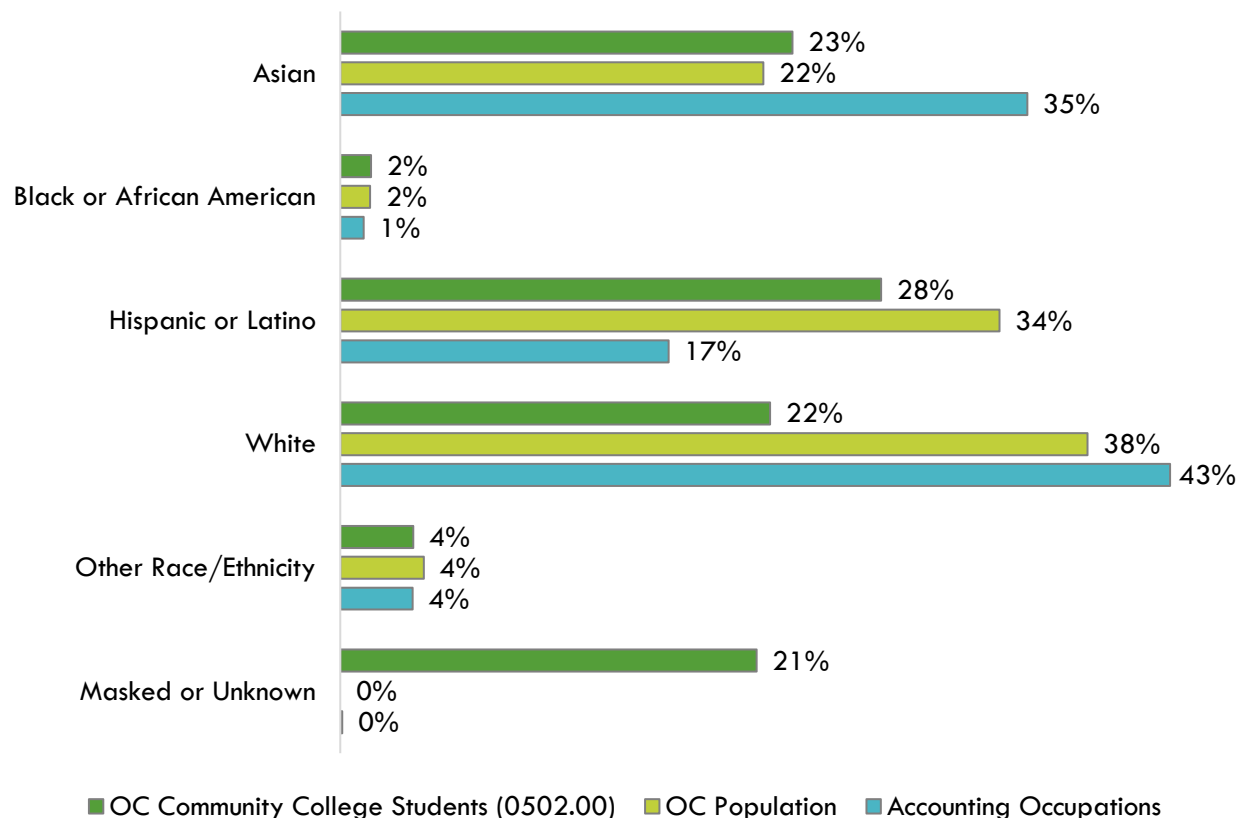
### Ethnicity:

Exhibit 20 compares the ethnicity of Orange County community college students enrolled in accounting programs, the overall Orange County population, and occupation-specific data for the four accounting occupations included in this report.

Notably, 43% of workers employed in these accounting occupations are white, which is higher than the population (38%) and community college accounting students (22%). Similarly, 35% of workers in these occupations are Asian, which is significantly higher than community college accounting students (23%) and the population (22%). Conversely, only 17% of workers in these occupations are Hispanic or Latino, which is half the population (34%) and significantly lower than community college accounting students (28%).

Examining disaggregated data for each occupation (not shown), 43% of *accountants and auditors*<sup>^</sup> are Asian, the highest of all four occupations. *Budget analysts*<sup>^</sup> has the highest percentage of Hispanic or Latino workers (26%), closely followed by *bookkeeping, accounting, and auditing clerks*.

Exhibit 20: Program and County Demographics by Ethnicity





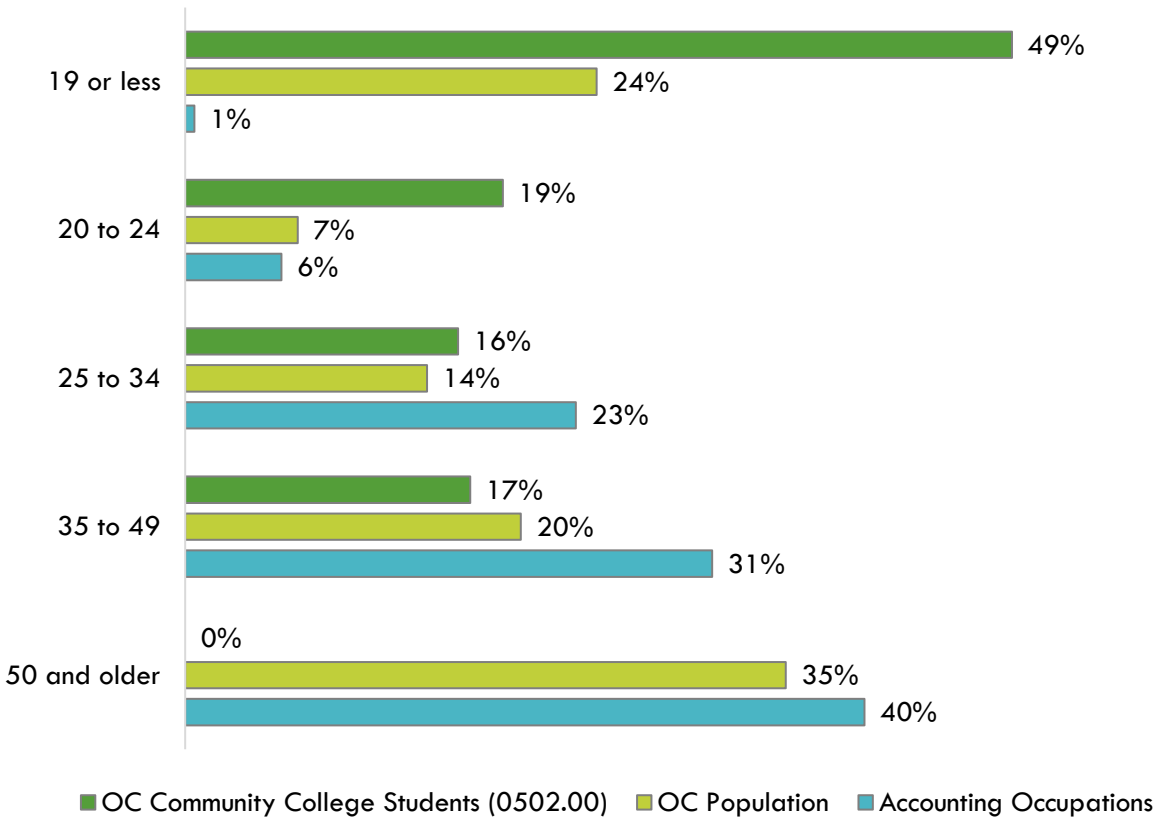
## Age:

Exhibit 21 compares the age of Orange County community college students enrolled in accounting programs, the overall Orange County population, and occupation-specific data for the four accounting occupations included in this report.

Nearly 50% of community college accounting students are 19 or less, which is double the population (24%) and significantly higher than these occupations (1%). Conversely, 40% of workers in these occupations are 50 and older, which is slightly higher than the population (35%) and significantly higher than community college accounting students (0%).

Examining disaggregated data for each occupation (not shown), *bookkeeping, accounting, and auditing clerks* (54%) and *budget analysts* (48%) have the highest percentage of workers age 50 and older.

Exhibit 21: Program and County Demographics by Age

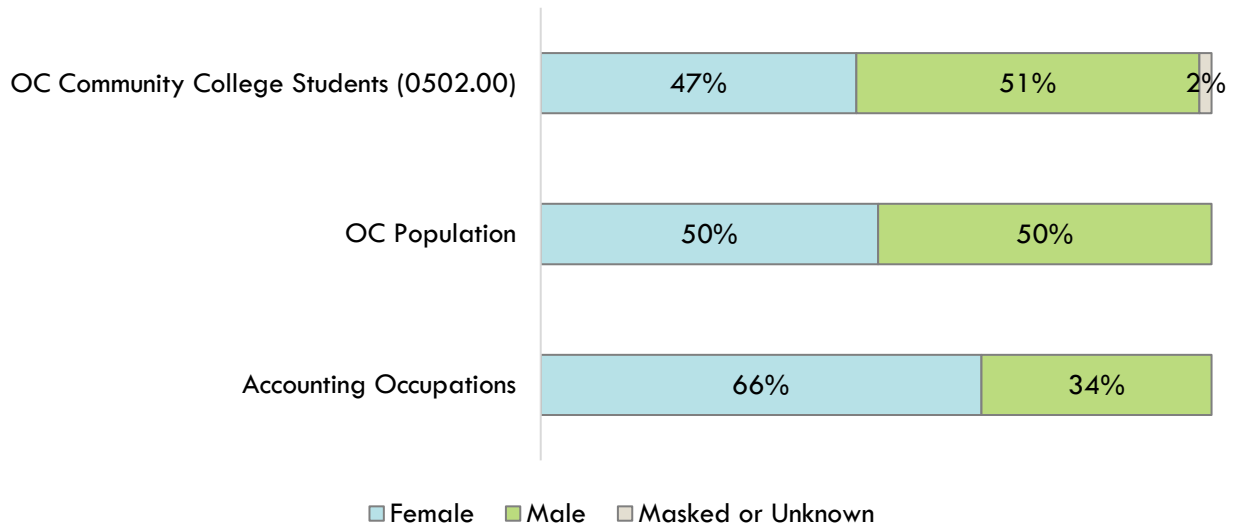


## Sex:

Exhibit 22 compares the sex of Orange County community college students enrolled in accounting programs, the overall Orange County population, and occupation-specific data for these accounting occupations.

Though the population and community college accounting students are largely split evenly, 66% of workers in these accounting occupations are women. Examining disaggregated data for each occupation (not shown), *bookkeeping, accounting, and auditing clerks* has the largest percentage of women (84%). This occupation also has the lowest entry-level wages and entry-level education requirements of all four accounting occupations.

Exhibit 22: Program and County Demographics by Sex



## Appendix A: Methodology

The OC COE prepared this report by analyzing data from occupations and education programs. Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies. Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

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 an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a “supply table” with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart ([datamart.cccco.edu](http://datamart.cccco.edu)) and CIP code data comes from 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. 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 in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Data included in this analysis represent the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the OC COE. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study which can signal demand and show what employers are looking for in potential employees but is not a perfect measure of the quantity of open positions.

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

## Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	<p>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 Statistics and the American Community Survey. For more information, see <a href="https://lightcast.io/">https://lightcast.io/</a></p>
Living Wage	<p>The living wage is derived from the Insight Center’s California Family Needs Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data, last updated in September 2021, assesses the cost of housing, food, child care, health care, transportation, and taxes. For more information, see: <a href="https://insightccd.org/family-needs-calculator/">https://insightccd.org/family-needs-calculator/</a></p> <p>The living wage for one adult in Orange County is \$20.63 per hour (\$42,910.40 annually). This figure is used by the CCCCCO to calculate the percentage of students that attained the regional living wage. However, this figure is outdated and does not reflect recent increases in the cost of living.</p> <p>The MIT Living Wage, updated on February 14, 2024, better accounts for existing economic conditions, with the current MIT Living Wage in Orange County being \$30.48. For more information, see: <a href="https://livingwage.mit.edu/counties/06059">https://livingwage.mit.edu/counties/06059</a></p>
Typical Education and Training Requirements, and Educational Attainment	<p>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 <a href="https://www.bls.gov/emp/documentation/education/tech.htm">https://www.bls.gov/emp/documentation/education/tech.htm</a></p>
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	<p>The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations. For more information, see <a href="https://www.onetonline.org/help/online/">https://www.onetonline.org/help/online/</a></p>
Educational Supply	<p>The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: <a href="https://datamart.cccco.edu">https://datamart.cccco.edu</a></p> <p>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 <a href="https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions">https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</a></p>

Data Type	Source
Student Metrics and Demographics	<p>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: <a href="https://www.calpassplus.org/LaunchBoard/Home.aspx">https://www.calpassplus.org/LaunchBoard/Home.aspx</a></p>
Population and Occupation Demographics	<p>The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. For more information, see: <a href="https://www.census.gov/programs-surveys/acs">https://www.census.gov/programs-surveys/acs</a></p> <p>Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: <a href="https://usa.ipums.org/usa/about.shtml">https://usa.ipums.org/usa/about.shtml</a></p>

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September 2024

