

Labor Market Analysis for Program Review:  
 0505.00/Business Administration  
 (Business Associate of Science)  
 (Business Certificate of Achievement)  
 Orange County Center of Excellence, April 2023



Program reviews are conducted by individual colleges to periodically review curriculum of their existing programs, and in the case of career technical education programs, ensure continued alignment with regional labor market needs. Because a program review evaluates an existing program, rather than establishing a new program, additional supply will not be added; therefore the endorsement criteria included in this report is determined slightly differently than it is for a new program that requires regional recommendation.

## 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:	<i>Comments:</i> there is projected to be <b>9,039 middle-skill annual job openings</b> throughout Los Angeles and Orange counties for these middle-skill business occupations, which is <b>more than the 1,976 awards conferred by educational institutions.</b>	
Living Wage: (Entry-Level, 25 <sup>th</sup> )	<i>Comments:</i> <b>The majority (93%) of annual job openings</b> for these middle-skill business occupations <b>have entry-level hourly wages above the OC living wage of \$20.63.</b> However, 88% of the middle-skill openings have entry-level hourly wages that are only 16 cents below the living wage.	
Education:	<i>Comments:</i> The majority (73%) of annual job openings for these middle-skill business occupations typically require a <b>high school diploma of equivalent. However, more than one-third of workers in the field have completed some college or an associate degree as their highest level of education.</b>	

Emerging Occupation(s)		
Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
<i>Comments:</i> N/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 business occupations:

- Middle-Skill
  - Administrative Services Managers (11-3012)
  - Facilities Managers (11-3013)

- Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (41-4012)
- Human Resources Assistants, Except Payroll and Timekeeping (43-4161)
- Above Middle-Skill – denoted with an asterisk (\*) throughout this report.
  - General and Operations Managers (11-1021)\*
  - Human Resources Specialists (13-1071)\*

Middle-skill occupations typically require a community college education while above middle-skill occupations typically require at least a bachelor’s degree.

Based on the available data, there appears to be a supply gap for these middle-skill business occupations in the region. Additionally, the majority of annual job openings have entry-level wages above the living wage and typical education requirements align with a community college education. **Therefore, due to all 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 (25 <sup>th</sup> Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Administrative Services Managers (11-3012)	1,313	1,000	OC: \$37.62	Bachelor's degree	36%
Facilities Managers (11-3013)	509	Accounted for Below	OC: \$36.51	Bachelor's degree	36%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (41-4012)	6,601	Accounted for Below	OC: \$22.86	High school diploma or equivalent	31%
Human Resources Assistants, Except Payroll and Timekeeping (43-4161)	616	976	OC: \$17.79	Associate degree	40%
<b>Middle-Skill Total</b>	<b>9,039</b>	<b>1,976</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
General and Operations Managers (11-1021)*	12,286	20,772	OC: \$36.77	Bachelor's degree	35%
Human Resources Specialists (13-1071)*	3,952	0	OC: \$27.39	Bachelor's degree	26%

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
<b>Above Middle-Skill Total</b>	<b>16,238</b>	<b>20,772</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Total</b>	<b>25,277</b>	<b>22,748</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

\*Denotes an above middle-skill occupation

## Demand:

- The number of jobs related to these middle-skill business occupations are projected to increase 0.1% through 2026. There is projected to be 9,039 annual job openings.
- Hourly entry-level wages for these middle-skill business occupations range from \$17.79 to \$37.62 in Orange County; 93% of middle-skill annual job openings have entry-level wages above the living wage.
- There were 56,414 online job postings for these middle-skill business occupations over the past 12 months. The highest number of postings were for sales representatives, account executives, and account managers.
- The typical entry-level education for these middle-skill business occupations ranges from a high school diploma or equivalent to a bachelor's degree.
- Between 31% and 40% of workers in these middle-skill occupations have completed some college or an associate degree as their highest level of educational attainment.

## Supply:

- There was an average of 1,976 awards conferred by 28 community colleges and one noncredit institution in Los Angeles and Orange Counties from 2018 to 2021.
- Non-community college institutions conferred an average of 11,606 awards from 2017 to 2020; all awards were related to the above middle-skill occupations.
- Orange County community college students that exited business administration programs in the 2019-20 academic year had a median annual wage of \$34,044 after exiting the program and 37% attained the regional living wage.
- Throughout Orange County, 77% of business administration students that exited their program in 2018-19 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 six of the business occupations researched in this report from 2016 through 2026. Employment in these business occupations declined 6% from 2019 to 2020 in Orange County, which is equal to the 6% decline across all occupations due to the COVID-19 pandemic. Employment in these business occupations is projected to grow at a similar rate when compared to all occupations through 2026.

## Exhibit 2: Annual Percent Change in Jobs for Business Occupations, 2016-2026

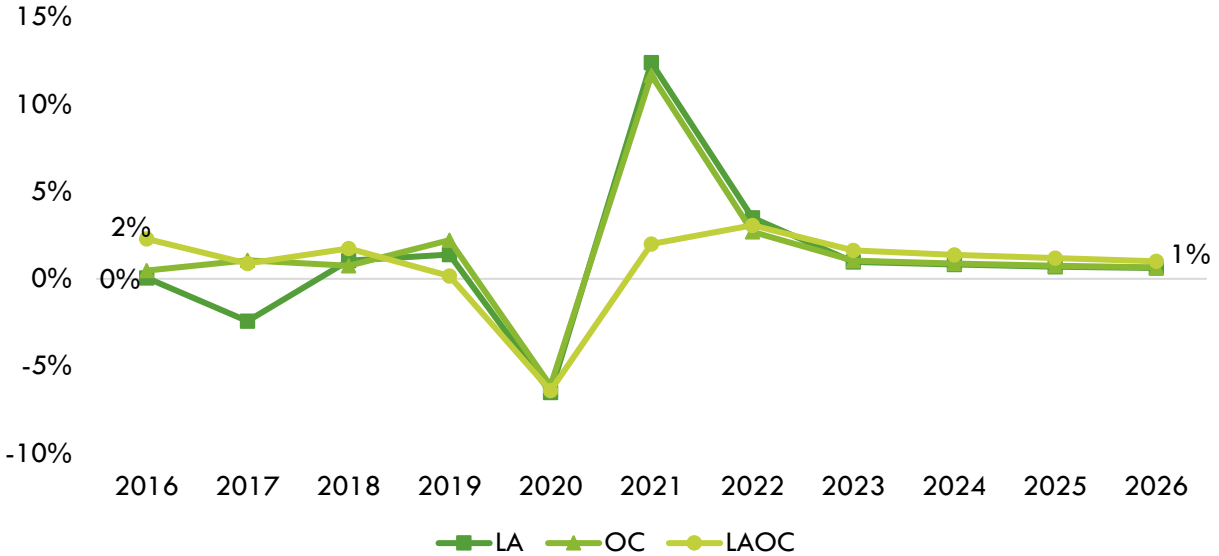


Exhibit 3 shows the five-year occupational demand projections for these middle-skill business occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase 0.1% through 2026. There is projected to be 9,039 jobs available annually.

### Exhibit 3: Middle-Skill Occupational Demand in Los Angeles and Orange Counties<sup>1</sup>

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	64,190	64,082	(108)	(0.2%)	6,628
Orange	23,488	23,660	171	1%	2,411
<b>Total</b>	<b>87,678</b>	<b>87,741</b>	<b>63</b>	<b>0.1%</b>	<b>9,039</b>

Exhibit 4 shows the five-year occupational demand projections for these above middle-skill business occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 11% through 2026. There is projected to be 16,238 jobs available annually.

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

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	101,846	113,183	11,337	11%	11,841
Orange	39,390	43,086	3,696	9%	4,398
<b>Total</b>	<b>141,236</b>	<b>156,269</b>	<b>15,033</b>	<b>11%</b>	<b>16,238</b>

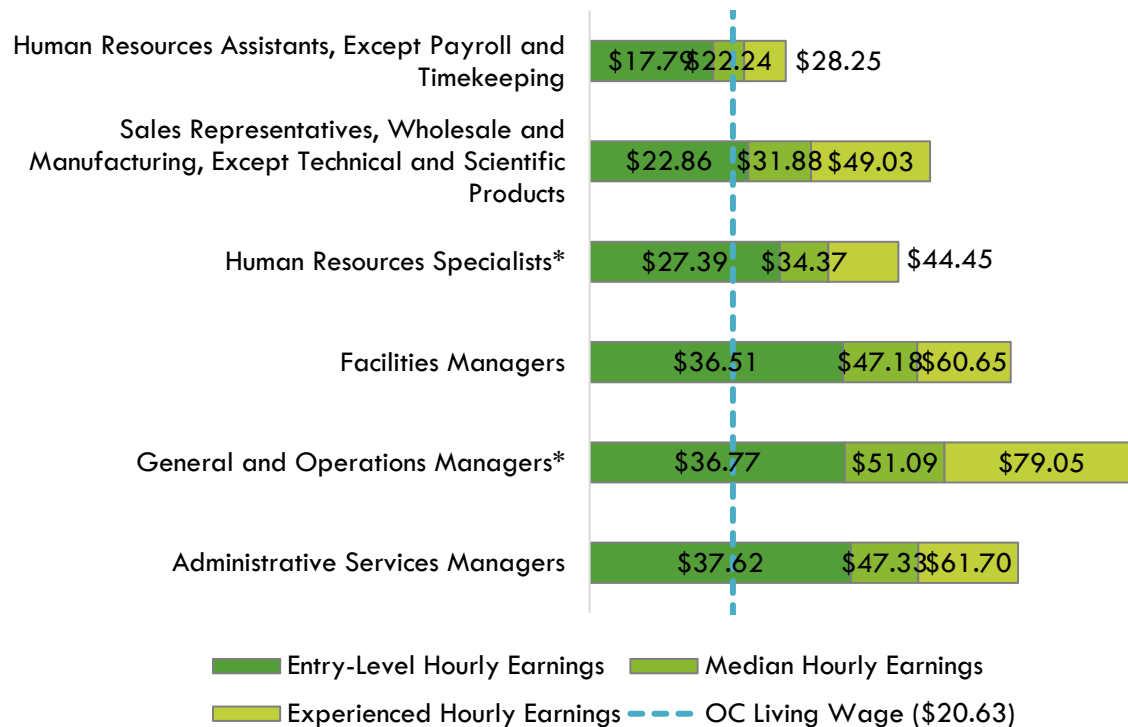
<sup>1</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

## Wages:

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

The majority (93%) of annual openings for these middle-skill business occupations have entry-level wages above the living wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages range between \$17.79 and \$37.62. Orange County's average wages are similar to the average statewide wage of \$40.49 for these occupations. Exhibit 5 shows the wage range for each of these business occupations in Orange County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

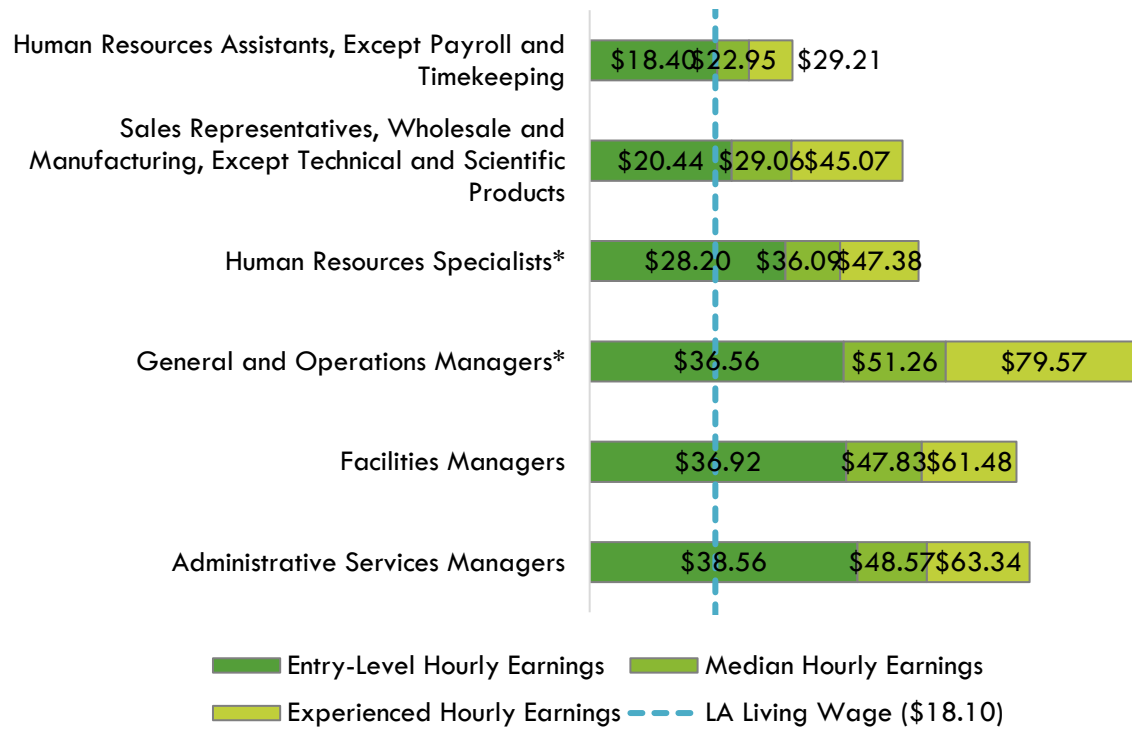
**Exhibit 5: Wages by Occupation in Orange County**



\*Denotes an above middle-skill occupation

All annual openings for these middle-skill business occupations have entry-level wages above the living wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages range between \$18.40 and \$38.56. Los Angeles County's average wages are below the average statewide wage of \$40.49 for these occupations. Exhibit 6 shows the wage range for each of these business occupations in Los Angeles County 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



\*Denotes an above middle-skill occupation

### 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>2</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 96,272 online job postings related to these business occupations listed in the past 12 months. Of those, 59% (56,414) were for middle-skill business occupations. Exhibit 7 shows the number of job postings by occupation.

<sup>2</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 7: Number of Job Postings by Occupation (n=96,272)

Occupation	Job Postings	Percentage of Job Postings
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	46,993	49%
General and Operations Managers*	21,670	23%
Human Resources Specialists*	18,188	19%
Facilities Managers	3,424	4%
Administrative Services Managers	3,229	3%
Human Resources Assistants, Except Payroll and Timekeeping	2,768	3%
<b>Total Postings</b>	<b>4,584</b>	<b>100%</b>

\*Denotes an above middle-skill occupation

The top employers for the middle-skill business occupations in the region, by number of job postings, are shown in Exhibit 8.

### Exhibit 8: Top Middle-Skill Employers by Number of Job Postings (n=56,414)

Employer	Job Postings	Percentage of Job Postings
Spectrum	941	2%
Allied Universal	448	1%
Nordstrom	408	1%
Mutual of Omaha	273	0.5%
Robert Half	246	0.4%
UnitedHealth Group	241	0.4%
Aston Carter	212	0.4%
Target	207	0.4%
24 Hour Fitness	204	0.4%
University of California	200	0.4%

The top employers for the above middle-skill human resource occupations in the region, by number of job postings, are shown in Exhibit 9.

### Exhibit 9: Top Above Middle-Skill Employers by Number of Job Postings (n=39,858)

Employer	Job Postings	Percentage of Job Postings
Robert Half	418	1%
CVS Health	382	1%
Aston Carter	336	1%
University of California	310	1%
Amazon	253	1%
Disney	253	1%
Marriott International	251	1%
Dollar Tree	229	1%
Elevance Health	227	1%
Randstad	219	1%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown for these middle-skill occupations in Exhibit 10.

### Exhibit 10: Top Skills for Middle-Skill Occupations by Number of Job Postings (n=56,414)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Selling Techniques (12,359)	Sales (39,668)	Microsoft Excel (8,456)
Marketing (12,083)	Communications (26,182)	Microsoft Office (7,388)
Sales Prospecting (11,138)	Customer Service (21,418)	Microsoft PowerPoint (5,567)
Customer Relationship Management (7,764)	Management (15,356)	Microsoft Outlook (5,069)
Outside Sales (5,443)	Presentations (10,096)	Salesforce (4,529)
Business Development (5,329)	Self-Motivation (9,507)	Microsoft Word (2,533)
Account Management (5,054)	Detail Oriented (8,785)	Spreadsheets (1,077)
Business To Business (4,900)	Microsoft Excel (8,456)	Customer Relationship Management (CRM) Software (895)
Sales Process (4,868)	Leadership (8,242)	Google Workspace (734)
Cold Calling (4,675)	Problem Solving (8,237)	Human Resources Information System (HRIS) (626)

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 11.

### Exhibit 11: Top Skills for Above Middle-Skill Occupations by Number of Job Postings (n=39,858)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Operations Management (5,852)	Communications (20,092)	Microsoft Excel (7,609)
Marketing (4,574)	Management (18,603)	Microsoft Office (6,787)
Auditing (4,426)	Operations (17,648)	Microsoft PowerPoint (5,003)
Human Resources Information System (HRIS) (4,065)	Leadership (13,573)	Microsoft Outlook (4,102)
Finance (3,883)	Customer Service (11,896)	Human Resources Information System (HRIS) (4,065)
Talent Acquisition (3,763)	Detail Oriented (8,625)	Applicant Tracking Systems (3,226)
Employee Relations (3,629)	Sales (7,846)	Microsoft Word (2,233)
Applicant Tracking Systems (3,226)	Problem Solving (7,784)	Spreadsheets (1,011)
Performance Management (3,002)	Microsoft Excel (7,609)	Workday (Software) (984)
Accounting (2,936)	Writing (7,572)	Dashboard (816)



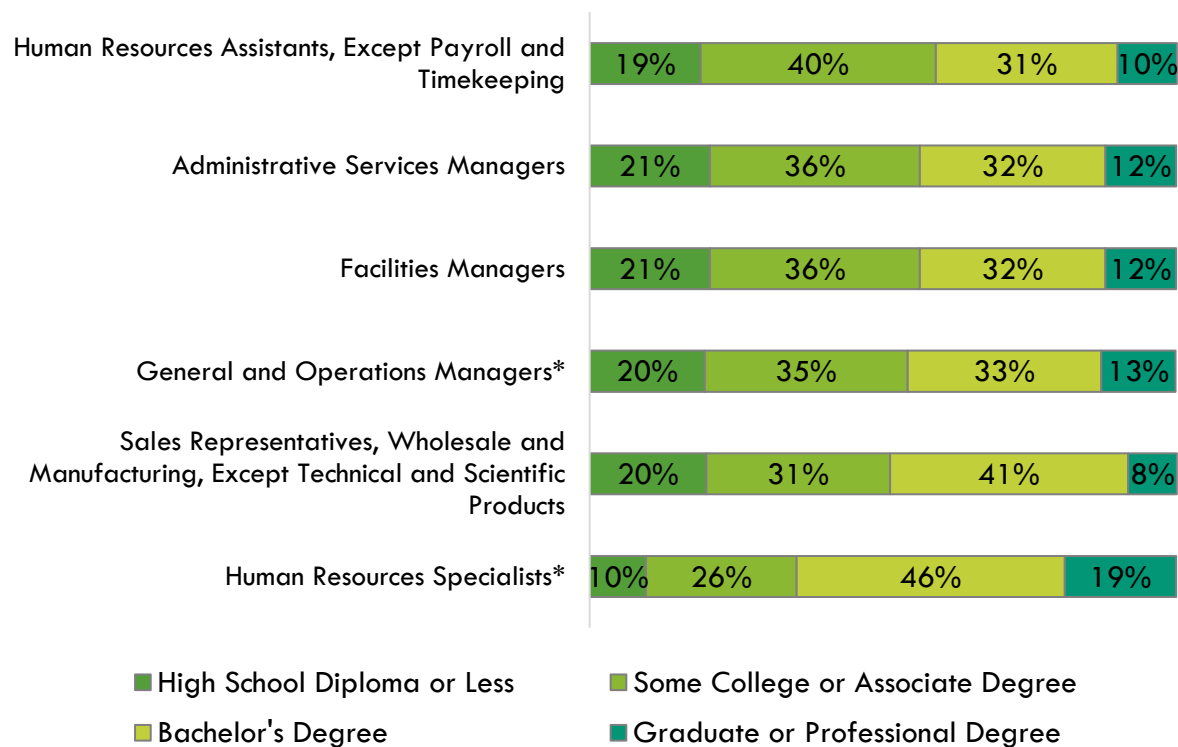
## Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for *sales representatives, wholesale and manufacturing, except technical and scientific products*; an associate degree for *human resources assistants, except payroll and timekeeping*; and a bachelor's degree for *administrative services managers, facilities managers, and general and operations managers*. The national-level educational attainment data indicates that between 31% and 40% of workers in the middle-skill occupations have completed some college or an associate degree as their highest level of education. Between 26% and 35% of workers in the above middle-skill occupations have completed some college or an associate degree. Exhibit 12 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Of the 54% of the cumulative job postings for these middle-skill business occupations that listed a minimum education requirement in Los Angeles/Orange County, 59% (18,133) requested a bachelor's, master's, or doctoral degree and 41% (12,520) requested a high school diploma or an associate degree.

Of the 67% of the postings for these above middle-skill business occupations that listed a minimum education requirement, 71% (19,022) requested a bachelor's, master's, or doctoral degree and 29% (7,639) requested a high school diploma or an associate degree.

**Exhibit 12: National-level Educational Attainment for Occupations**



\*Denotes an above middle-skill occupation

## Educational Supply

### Community College Supply:

Exhibit 13 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Business and Commerce, General (0501.00), Banking and Finance (0504.00), Business Administration (0505.00), Business Management (0506.00), Management Development and Supervision (0506.30), Small Business and Entrepreneurship (0506.40), Retail Store Operations and Management (0506.50), International Business and Trade (0508.00), Office Technology/Office Computer Applications (0514.00).

The colleges with the most completions in the region are Pasadena, Cerritos, Coastline, and Mt. San Antonio. Over the past 12 months, there was one other related program recommendation request from regional community colleges.

**Exhibit 13: Regional Community College Awards (Certificates and Degrees), 2018-2021**

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
0501.00	Business and Commerce, General	Cerritos	41	5	4	17
		Glendale	40	46	61	48
		LA City	157	116	50	107
		LA Harbor	13	10	12	12
		LA Mission	9	0	0	3
		LA Pierce	5	17	13	12
		LA Southwest	30	29	29	29
		Long Beach	130	237	189	185
		Mt San Antonio	209	117	117	148
		Santa Monica	1	5	12	6
		West LA	5	44	67	38
		<b>LA Subtotal</b>	<b>640</b>	<b>626</b>	<b>554</b>	<b>605</b>
		Coastline	5	6	5	5
		Saddleback	14	19	39	24
		<b>OC Subtotal</b>	<b>19</b>	<b>25</b>	<b>44</b>	<b>29</b>
		<b>Supply Subtotal/Average</b>			<b>244</b>	<b>184</b>
0504.00	Banking and Finance	Citrus	8	0	0	3
		Glendale	1	3	3	2
		LA City	9	21	12	14
		LA Pierce	1	5	9	5
		LA Southwest	2	2	0	2
		LA Valley	34	34	36	34
		Long Beach	0	1	3	1
		Pasadena	5	1	2	3
		<b>LA Subtotal</b>	<b>60</b>	<b>67</b>	<b>65</b>	<b>64</b>

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average		
		-	-	-	-	-		
		<b>OC Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>		
		<b>Supply Subtotal/Average</b>	<b>60</b>	<b>67</b>	<b>65</b>	<b>64</b>		
0505.00	Business Administration	Cerritos	206	250	222	226		
		Citrus	349	399	416	388		
		Compton	49	28	31	36		
		East LA	227	247	391	288		
		El Camino	295	306	342	314		
		Glendale	216	241	217	225		
		LA City	84	91	151	109		
		LA Harbor	83	83	87	84		
		LA Mission	51	88	89	76		
		LA Pierce	211	208	255	225		
		LA Southwest	35	56	45	45		
		LA Trade	0	7	28	12		
		LA Valley	131	147	172	150		
		Long Beach	375	293	319	329		
		Mt San Antonio	248	269	337	285		
		Pasadena	909	1191	1240	1113		
		Rio Hondo	241	276	246	255		
		Santa Monica	297	334	337	323		
		West LA	120	156	134	137		
				<b>LA Subtotal</b>	<b>4,127</b>	<b>4,670</b>	<b>5,059</b>	<b>4,620</b>
				Coastline	763	592	432	596
				Cypress	228	244	232	234
				Fullerton	374	373	319	356
				Golden West	187	166	194	182
				Irvine	306	349	299	318
				Orange Coast	381	443	368	397
				Saddleback	297	382	315	331
				Santa Ana	217	220	198	212
		Santiago Canyon	159	157	153	157		
		<b>OC Subtotal</b>	<b>2,912</b>	<b>2,926</b>	<b>2,510</b>	<b>2,783</b>		
		<b>Supply Subtotal/Average</b>	<b>313</b>	<b>383</b>	<b>402</b>	<b>365</b>		
0506.00	Business Management	Cerritos	456	516	387	453		
		Citrus	2	0	0	1		
		Compton	3	0	0	1		

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		East LA	29	18	17	22
		El Camino	23	33	49	35
		Glendale	9	13	15	13
		LA City	18	39	18	25
		LA Mission	3	1	4	3
		LA Pierce	3	2	7	4
		LA Valley	33	36	30	33
		Long Beach	21	29	44	31
		Mt San Antonio	202	145	150	166
		Santa Monica	23	0	0	7
		<b>LA Subtotal</b>	<b>825</b>	<b>832</b>	<b>721</b>	<b>794</b>
		Coastline	84	72	307	155
		Cypress	6	3	7	5
		Fullerton	11	12	11	11
		Golden West	20	8	11	12
		Irvine	3	14	5	7
		North Orange Adult	27	36	19	27
		Orange Coast	40	16	19	25
		Santa Ana	64	71	40	58
		Santiago Canyon	17	24	55	33
		<b>OC Subtotal</b>	<b>272</b>	<b>256</b>	<b>474</b>	<b>333</b>
		<b>Supply Subtotal/Average</b>	<b>313</b>	<b>383</b>	<b>402</b>	<b>365</b>
0506.30	Management Development and Supervision	Cerritos	14	32	50	32
		LA Pierce	4	4	5	4
		LA Southwest	12	9	15	12
		LA Trade	5	4	8	6
		LA Valley	23	20	18	20
		Pasadena	3	3	10	5
		Rio Hondo	20	25	18	21
		Santa Monica	6	19	19	15
		<b>LA Subtotal</b>	<b>87</b>	<b>116</b>	<b>143</b>	<b>115</b>
		Coastline	355	247	7	203
		Cypress	0	0	1	0
		Irvine	0	0	3	1
		Saddleback	34	27	53	38
		Santa Ana	4	11	9	8

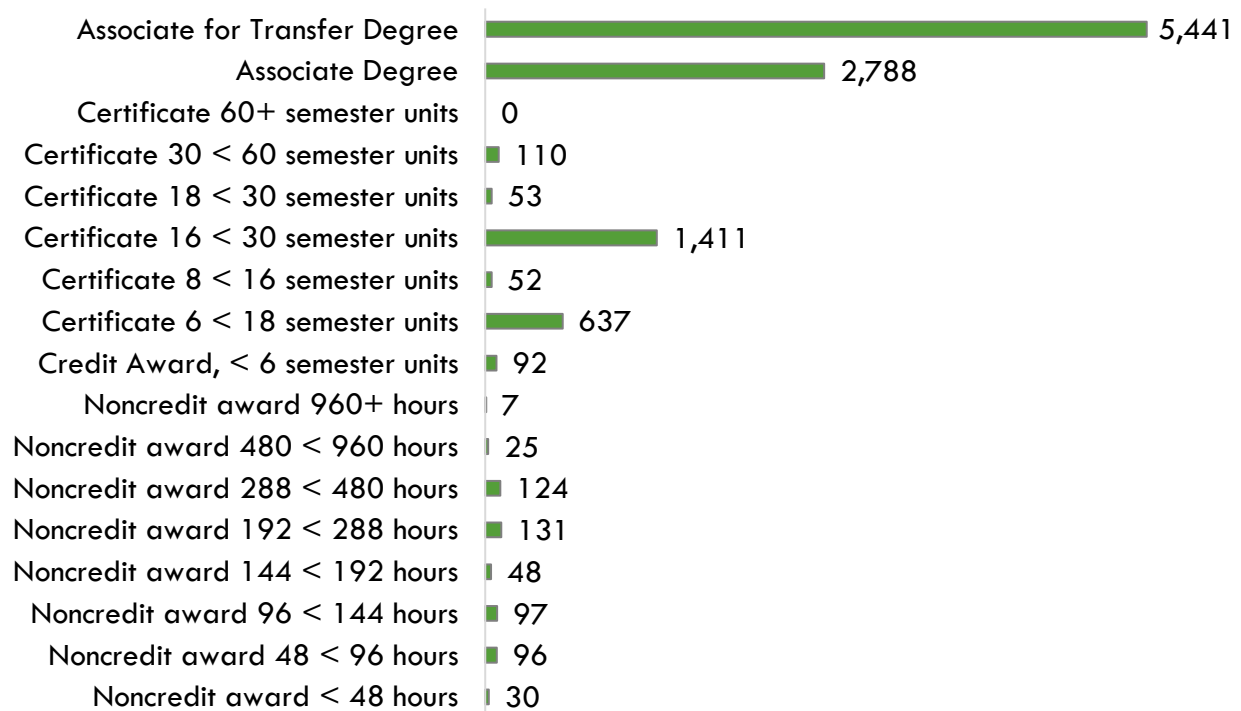
TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		Santiago Canyon	0	2	1	1
		<b>OC Subtotal</b>	<b>393</b>	<b>287</b>	<b>74</b>	<b>251</b>
		<b>Supply Subtotal/Average</b>	<b>480</b>	<b>403</b>	<b>217</b>	<b>366</b>
0506.40	Small Business and Entrepreneurship	Cerritos	34	38	18	30
		Citrus	2	0	0	1
		East LA	0	4	1	2
		Glendale	0	1	1	1
		LA City	7	5	4	5
		LA Pierce	4	4	6	5
		LA Trade	6	6	9	7
		Long Beach	0	0	2	1
		Mt San Antonio	32	26	19	26
		Pasadena	3	9	22	12
		Rio Hondo	7	6	4	6
		Santa Monica	9	19	22	17
		West LA	5	4	1	3
		<b>LA Subtotal</b>	<b>109</b>	<b>122</b>	<b>109</b>	<b>116</b>
		Coastline	5	4	16	9
		Cypress	4	7	4	4
		Fullerton	4	3	6	4
		Golden West	2	13	2	6
		Irvine	48	56	11	38
		Saddleback	8	14	8	10
		Santa Ana	7	5	6	6
<b>OC Subtotal</b>	<b>78</b>	<b>102</b>	<b>53</b>	<b>77</b>		
		<b>Supply Subtotal/Average</b>	<b>187</b>	<b>224</b>	<b>162</b>	<b>193</b>
0506.50	Retail Store Operations and Management	Cerritos	218	206	198	207
		Compton	1	0	0	0
		El Camino	3	2	2	2
		LA City	0	2	0	1
		LA Pierce	1	0	0	0
		LA Trade	4	1	2	2
		LA Valley	4	3	2	3
		Mt San Antonio	2	1	2	2
		Pasadena	0	1	2	1
		Rio Hondo	2	1	3	2
		<b>LA Subtotal</b>	<b>235</b>	<b>217</b>	<b>211</b>	<b>220</b>

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		Coastline	2	1	0	1
		Golden West	2	0	0	1
		Orange Coast	2	0	0	0
		Saddleback	0	0	2	0
		Santa Ana	2	0	0	0
		<b>OC Subtotal</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>2</b>
<b>Supply Subtotal/Average</b>			<b>107</b>	<b>75</b>	<b>85</b>	<b>88</b>
0508.00	International Business and Trade	Cerritos	26	15	9	17
		East LA	3	8	6	6
		Glendale	0	5	6	3
		LA Harbor	0	0	3	1
		LA Pierce	2	1	1	1
		Long Beach	4	7	15	9
		Mt San Antonio	28	29	17	24
		Pasadena	4	4	7	5
		Rio Hondo	1	2	3	2
		Santa Monica	0	4	4	3
		<b>LA Subtotal</b>	<b>68</b>	<b>75</b>	<b>71</b>	<b>71</b>
		Fullerton	1	3	2	2
		Saddleback	5	8	5	6
		Santa Ana	89	112	31	78
		<b>OC Subtotal</b>	<b>95</b>	<b>123</b>	<b>38</b>	<b>86</b>
<b>Supply Subtotal/Average</b>			<b>263</b>	<b>198</b>	<b>109</b>	<b>157</b>
0506.40	Small Business and Entrepreneurship	Cerritos	14	10	14	13
		Citrus	23	3	0	8
		East LA	54	34	51	47
		El Camino	2	2	3	3
		Glendale	44	25	30	33
		LA City	1	6	5	4
		LA Harbor	5	11	7	7
		LA Mission	23	12	11	15
		LA Pierce	54	44	75	58
		LA Southwest	2	0	6	2
		LA Trade	31	22	21	25
		LA Valley	119	107	80	102
		Long Beach	33	57	88	59
		Mt San Antonio	75	228	183	162

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		Pasadena	38	13	59	37
		Rio Hondo	0	0	16	5
		Santa Monica	7	12	8	9
		West LA	1	1	1	1
		<b>LA Subtotal</b>	<b>526</b>	<b>587</b>	<b>658</b>	<b>590</b>
		Coastline	12	9	1	7
		Cypress	17	16	8	14
		Golden West	8	1	0	3
		Irvine	18	16	9	15
		North Orange Adult	70	33	37	46
		Saddleback	11	8	7	8
		Santa Ana	138	223	246	203
		Santiago Canyon	106	97	71	90
		<b>OC Subtotal</b>	<b>380</b>	<b>403</b>	<b>379</b>	<b>386</b>
		<b>Supply Subtotal/Average</b>	<b>906</b>	<b>990</b>	<b>1,037</b>	<b>976</b>
		<b>Supply Subtotal/Average</b>	<b>10,834</b>	<b>11,435</b>	<b>11,165</b>	<b>11,142</b>

Exhibit 14 shows the annual average community college awards by type from 2018-19 through 2020-21. The plurality of the awards are for associate for transfer degrees, followed by associate degrees, and certificates of 16 to less than 30 semester units.

### Exhibit 14: Annual Average Community College Awards by Type, 2018-2021



## Community College Student Outcomes:

Exhibit 15 shows the Strong Workforce Program (SWP) metrics for business administration programs in Coast Community College District (CCCD), the Orange County Region, and California. Of the 5,425 business students in Orange County, 19% (1,057) attended a CCCD college.

Additionally, CCCD students that exited business administration programs in the 2019-20 academic year had a 42% median change in earnings, which is higher than the Orange County Region (36%) and state (29%). However, median earnings for students that exited business programs were lower for CCCD (\$31,469) than the Orange County Region (\$34,044), and statewide (\$34,044).

### Exhibit 15: Business Administration (0505.00) Strong Workforce Program Metrics, 2020-21<sup>3</sup>

SWP Metric	NOCCCD	OC Region	California
SWP Students	1,057	5,425	46,190
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	33%	36%	38%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Insufficient Data	Insufficient Data	72%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	700	2,055	15,975
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	127	683	5,147
SWP Students with a Job Closely Related to Their Field of Study (2018-19)	100%	77%	72%
Median Annual Earnings for SWP Exiting Students (2019-20)	\$31,496 (\$15.14)	\$34,044 (\$16.37)	\$34,044 (\$16.37)
Median Change in Earnings for SWP Exiting Students (2019-20)	42%	36%	29%
SWP Exiting Students Who Attained the Living Wage (2019-20)	31%	37%	45%

## Non-Community College Supply:

For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for these business occupations. Exhibit 16 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Codes: Business/Commerce, General (52.0101), Business Administration and Management, General (52.0201), Entrepreneurship/Entrepreneurial Studies (52.0701), Finance, General (52.0801), International Business/Trade/Commerce (52.1101). Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, 55 institutions in the region conferred an average of 11,606 awards annually in related training programs.

<sup>3</sup> All SWP metrics are for 2020-21 unless otherwise noted.



Exhibit 16: Regional Non-Community College Awards, 2017-2020

CIP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
52.0101	Business/Commerce, General	Abraham Lincoln University	0	0	0	0
		Azusa Pacific University	9	13	16	13
		Loyola Marymount University	0	3	2	2
		Mount Saint Mary's University	0	0	0	0
<b>Supply Subtotal/Average</b>			<b>9</b>	<b>16</b>	<b>18</b>	<b>15</b>
52.0201	Business Administration and Management, General	Abraham Lincoln University	1	4	0	1
		Advanced College	0	0	0	0
		American Jewish University	0	0	3	1
		Angeles College	0	0	6	2
		Azusa Pacific University	111	122	106	113
		Bethesda University	22	24	26	24
		Biola University	87	113	137	112
		Brandman University	146	115	155	139
		California Intercontinental University	5	3	4	4
		California State Polytechnic University-Pomona	1,465	1,191	1,401	1,352
		California State University-Dominguez Hills	569	559	575	568
		California State University-Fullerton	2174	2366	2374	2305
		California State University-Long Beach	1326	1325	1443	1365
		California State University-Los Angeles	1028	1072	1131	1077
		California State University-Northridge	609	637	740	662
		Chapman University	331	331	474	379
		Concordia University-Irvine	95	98	87	93
		Fremont College	0	0	1	0
		Hope International University	31	52	57	47
		InterCoast Colleges-Santa Ana	0	0	18	6
Learnet Academy Inc	0	17	3	7		

CIP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
		Life Pacific University	15	11	15	14
		Los Angeles Pacific College	0	3	7	3
		Los Angeles Pacific University	0	1	0	0
		Loyola Marymount University	0	32	29	20
		Marymount California University	67	65	59	64
		Mount Saint Mary's University	41	39	51	44
		Pacific College	0	0	0	0
		Pacific Oaks College	0	0	7	2
		Pacific States University	2	2	1	2
		Pathways College	0	0	0	0
		Pepperdine University	191	255	185	210
		Platt College-Anaheim	2	8	14	8
		Platt College-Los Angeles	8	6	11	9
		The Master's University and Seminary	71	64	64	66
		Trident University International	326	277	0	201
		University of Antelope Valley	33	33	26	30
		University of California-Irvine	205	260	306	257
		University of La Verne	349	314	294	319
		University of Southern California	993	1,022	1,020	1,012
		University of the People	67	75	205	116
		University of the West	15	6	7	9
		Vanguard University of Southern California	78	71	51	67
		Westcliff University	83	97	71	84
		Whittier College	57	73	64	65
		Woodbury University	38	23	21	27
		<b>Supply Subtotal/Average</b>	<b>10,641</b>	<b>10,766</b>	<b>11,249</b>	<b>10,886</b>
52.0701	Entrepreneurship/ Entrepreneurial Studies	Azusa Pacific University	1	0	4	2
		California Intercontinental University	0	0	1	0
		Hussian College-Los Angeles	0	0	1	0

CIP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
		Loyola Marymount University	74	66	70	70
		Mount Saint Mary's University	0	1	0	0
		Pitzer College	0	1	0	0
<b>Supply Subtotal/Average</b>			<b>75</b>	<b>68</b>	<b>76</b>	<b>72</b>
52.0801	Finance, General	California State University-Northridge	342	365	402	370
		Loyola Marymount University	81	108	105	98
		Pepperdine University	13	6	13	11
<b>Supply Subtotal/Average</b>			<b>436</b>	<b>479</b>	<b>520</b>	<b>479</b>
52.1101	International Business/Trade/Commerce	Azusa Pacific University	12	8	8	9
		California State University-Fullerton	60	75	77	71
		Mount Saint Mary's University	6	2	4	4
		Pepperdine University	31	23	28	27
		University of La Verne	4	6	2	4
		University of Southern California	39	32	46	39
		Vanguard University of Southern California	0	0	0	0
<b>Supply Subtotal/Average</b>			<b>152</b>	<b>146</b>	<b>165</b>	<b>154</b>
<b>Supply Subtotal/Average</b>			<b>11,313</b>	<b>11,475</b>	<b>12,028</b>	<b>11,606</b>

## Regional Demographics

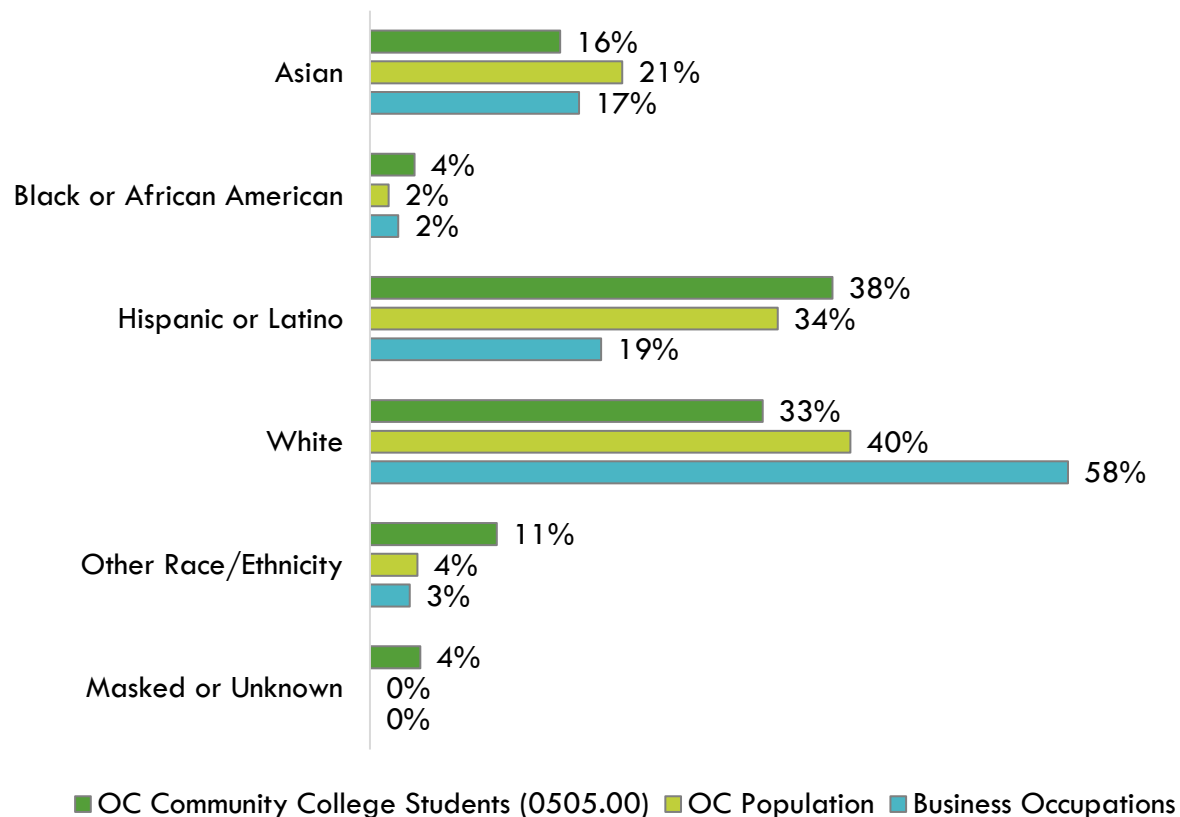
This section analyzes demographic data for Orange County community college students enrolled in business administration programs compared to the OC population, as well occupational data, for the purpose of identifying potential diversity and equity issues that can be addressed by community college programs.

### Ethnicity:

Exhibit 17 shows the ethnicity of Orange County community college students enrolled in business administration programs compared to the overall Orange County population, as well as the six business occupations included in this report. Notably, 58% of workers employed in these business occupations are white, which is significantly higher than the population (40%) and community college business students (33%). Conversely, 38% of community college business students are Hispanic or Latino, which is higher than the Orange County population (34%) and significantly higher than workers in these business occupations (19%).

Examining disaggregated data for each occupation (not shown), there are no significant differences when comparing all occupations.

Exhibit 17: Program and County Demographics by Ethnicity

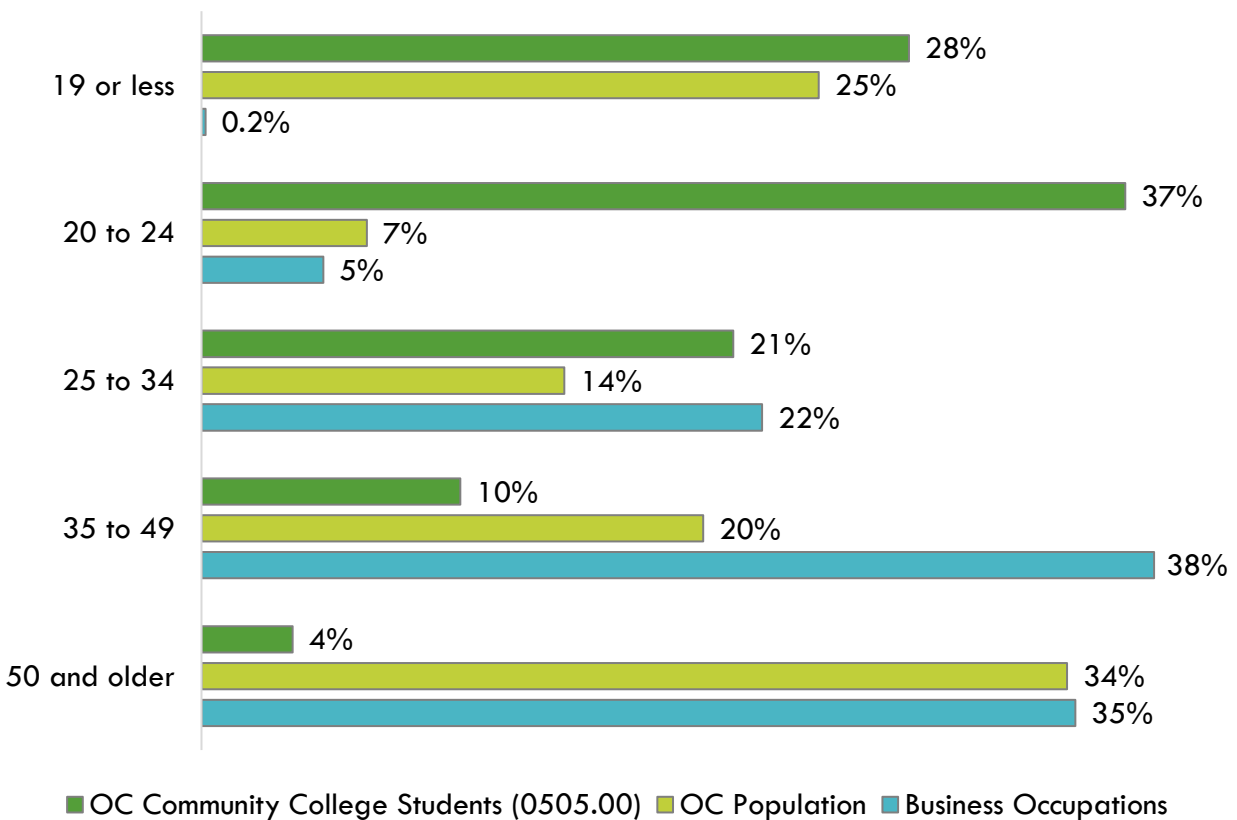


## Age:

Exhibit 18 shows the age of Orange County community college students enrolled in business administration programs compared to the overall Orange County population, as well as the six business occupations included in this report. The plurality of workers in these business occupations are age 35 to 49 (38%), which is significantly higher than the population (20%) and community college business students (10%). Only 5.2% of workers in these occupations are 24 or less, which is significantly lower than the population (32%), and community college business students (65%).

Examining disaggregated data for each occupation (not shown), the two human resources-related occupations have the highest percentage of workers under 35. Conversely, a majority of workers in the managerial occupations are 40 and older.

Exhibit 18: Program and County Demographics by Age



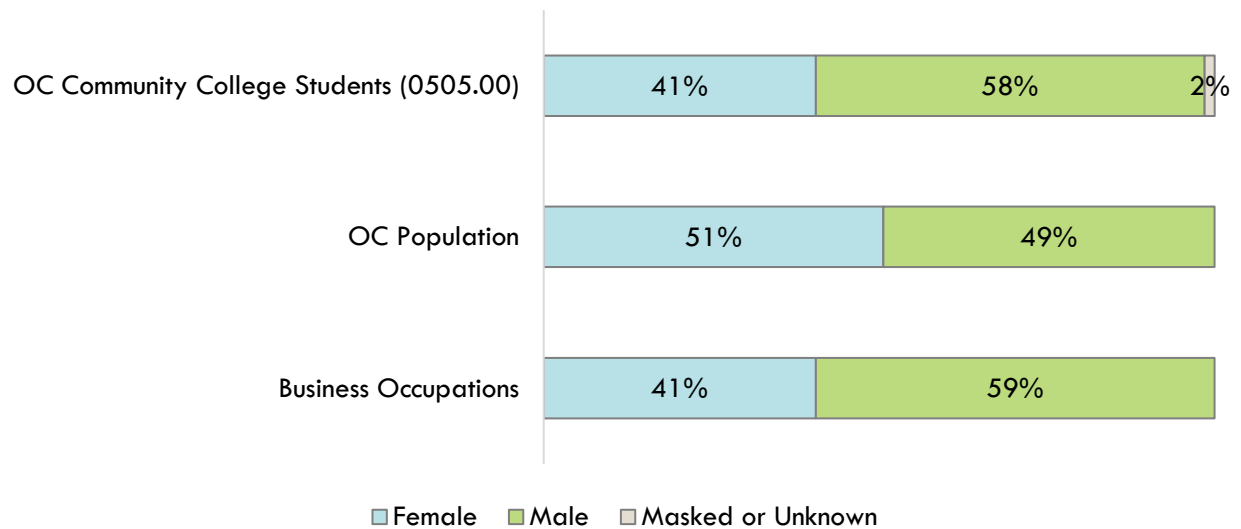
## Sex:

Exhibit 19 shows the sex of Orange County community college students enrolled in business programs compared to the overall Orange County population as well as these business occupations.

Though the Orange County population is split nearly evenly between men and women, 59% of workers in these business occupations and 58% of business administration students are men.

Examining disaggregated data for each occupation (not shown), the two human resources-related occupations have the highest percentage of women. Notably, *human resources assistants, except payroll and timekeeping* has the highest percentage of women (74%), but the lowest entry-level wages of all six occupations analyzed in this report.

Exhibit 19: 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 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.</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>
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>



Data Type	Source
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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