

Labor Market Analysis for Program Recommendation: 0506.40/Small Business and Entrepreneurship (Small Business)

Orange County Center of Excellence, March 2024



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

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 10,628 annual job openings throughout Los Angeles and Orange counties for <i>general and operations managers</i> , which is less than the 22,449 awards conferred by educational institutions . However, the educational programs that train for <i>general and operations managers</i> also prepare students for 22 other occupations that account for over 20,000 job openings. Because these programs train for a variety of occupations with high demand, there is an undersupply of labor for general and operations managers.	
Living Wage: (Entry-Level, 25 th)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments:</i> Typical entry-level hourly wages for <i>general and operations managers</i> are \$37.02, which is above the OC living wage of \$20.63.	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments:</i> The typical entry-level education for <i>general and operations managers</i> is a bachelor's degree. However, more than one-third of workers in the field have completed some college or an associate degree as their highest level of education.	

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 one middle-skill occupation:

- General and Operations Managers (11-1021)

The occupation included in this report was selected due to its relationship to entrepreneurial business skills, as well as its historical alignment with small business and entrepreneurship programs at community colleges. Additionally, this report includes data on the top middle-skill occupations for self-employment throughout the region to better understand other occupations for which entrepreneurial skills can be utilized. Regional community colleges should consider aligning entrepreneurship programs with programs that train for occupations with high self-employment rates such as cosmetology and barbering, real estate, and photography.

Based on the available data there appears to be a supply gap for *general and operations managers* in the region because business programs train for a wide variety of occupations not included in this report and supply is overstated. Additionally, entry-level wages are above the living wage and typical education

requirements for these occupations align with a community college education. **Therefore, due to all 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 th Percentile)	Typical Entry-Level Education	Community College Educational Attainment
General and Operations Managers (11-1021)	LA: 8,477 OC: 2,957	LA: 15,172 OC: 7,277	OC: \$37.02	Bachelor's degree	35%
Total	10,628	22,449	N/A	N/A	N/A

Demand:

- The number of jobs for *general and operations managers* is projected to increase 8% through 2027, equating to 10,628 annual job openings.
- Hourly entry-level wages for *general and operations managers* are \$37.02, which is above the living wage of \$20.63 in Orange County.
- There were 14,879 online job postings for *general and operations managers* over the past 12 months. The highest number of postings were for operations managers, general managers, and operations supervisors.
- The typical entry-level education for *general and operations managers* is a bachelor's degree.
- Approximately 35% of workers in the field have completed some college or an associate degree as their highest level of education.

Supply:

- There was an average of 10,177 awards conferred by all 28 community colleges, plus one noncredit center, in Los Angeles and Orange Counties from 2019 to 2022.
- Non-community college institutions conferred an average of 12,272 awards from 2019 to 2021.
- Orange County community college students that exited small business and entrepreneurship programs in the 2020-21 academic year had a median annual wage of \$35,454 after exiting the program and 38% attained the regional living wage.
- Throughout Orange County, 65% of small business and entrepreneurship 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 *general and operations managers* from 2017 through 2027. There was a 7% decline across all occupations from 2019 to 2020 due to the COVID-19 pandemic; employment for *general and operations managers* in Orange County declined 9% during the same period but rose sharply from 2020 to 2021. Employment for *general and operations managers* is projected to grow at a similar rate to all occupations through 2027.

Exhibit 2: Annual Percent Change in Jobs for General and Operations Managers, 2017-2027

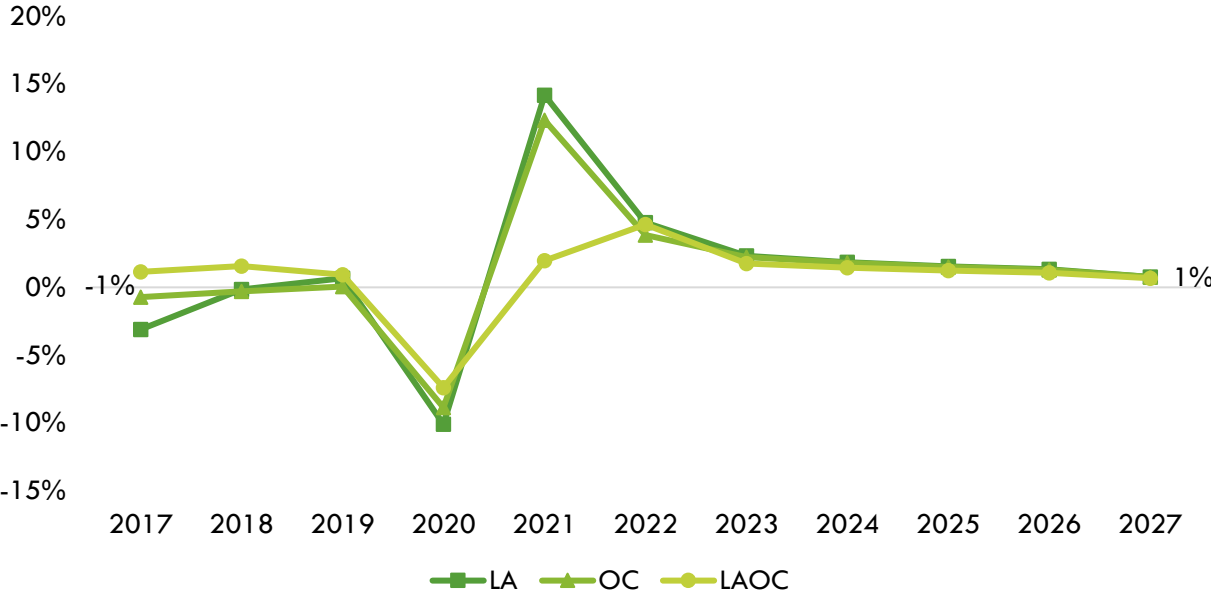


Exhibit 3 shows the five-year occupational demand projections for *general and operations managers*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 8% through 2027. There is projected to be 10,628 jobs available annually.

Exhibit 3: Occupational Demand in Los Angeles and Orange Counties¹

Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	72,658	78,182	5,523	8%	7,671
Orange	28,261	30,309	2,048	7%	2,957
Total	100,920	108,491	7,571	8%	10,628

To better understand other occupations for which entrepreneurial skills can be utilized, Exhibit 4 shows 15 middle-skill occupations with the highest rates of self-employment in Los Angeles/Orange County, sorted largest to smallest by 2022 jobs. These 15 occupations have an average self-employment rate of 61%, which is significantly higher than the average of 9% across all occupations. Additionally, community colleges throughout the region have related programs for several of these occupations, including *barbers, photographers, real estate sales agents, and hairdressers, hairstylists, and cosmetologists.*

¹ 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 4: Top Self-Employed Occupations in Los Angeles and Orange Counties
(sorted by Total Jobs)

Occupation	2022 Self-Employed Jobs	2022 Employed Jobs	2022 Total Jobs	2022 % Self-Employed
Hairdressers, Hairstylists, and Cosmetologists	18,323	8,836	27,159	67%
Real Estate Sales Agents	18,898	6,393	25,291	75%
Real Estate Brokers	5,920	6,348	12,268	48%
Massage Therapists	6,766	5,362	12,129	56%
Photographers	8,382	2,098	10,480	80%
Interpreters and Translators	2,079	1,804	3,883	54%
Jewelers and Precious Stone and Metal Workers	1,217	1,524	2,742	44%
Barbers	2,162	419	2,581	84%
Brickmasons and Blockmasons	851	808	1,659	51%
Animal Trainers	795	728	1,523	52%
Court Reporters and Simultaneous Captioners	611	652	1,264	48%
Woodworkers, All Other	393	311	703	56%
Musical Instrument Repairers and Tuners	206	213	419	49%
Desktop Publishers	214	138	352	61%
Watch and Clock Repairers	161	<10	169	95%

As of 2022, businesses with less than 50 employees in Los Angeles and Orange counties account for 97% of all businesses and employ 45% of all employees. Real Estate & Rental and Leasing has the highest percentage of businesses with less than 50 employees (97%), accounting for 78% of employment in that industry. Exhibit 5 shows the percentage of businesses and employment by industry and business size.

Exhibit 5: Small Business Size and Employment by Industry
in Los Angeles and Orange Counties, 2022

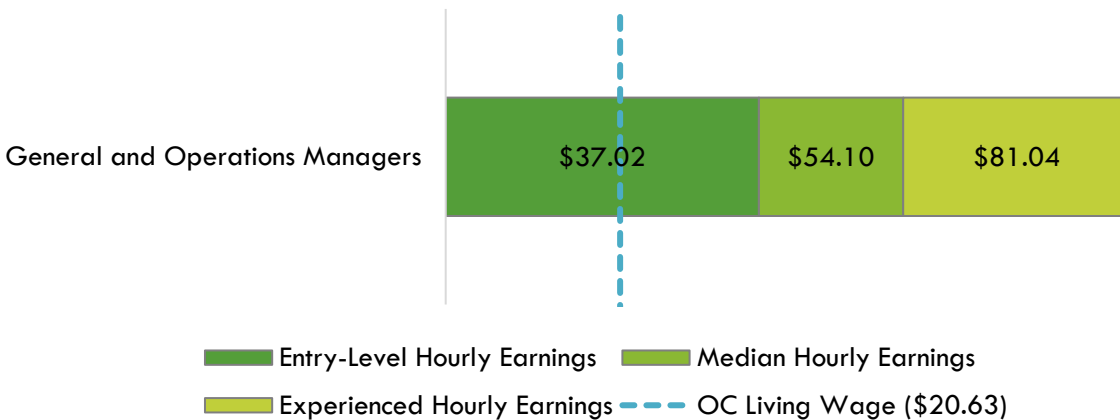
Industry	% of Businesses		% of Employees	
	0-49 Employees	50+ Employees	0-49 Employees	50+ Employees
Ag, Forestry, Fishing, Hunting	93%	7%	59%	41%
Mining	88%	12%	52%	48%
Utilities	81%	19%	17%	83%
Construction	97%	3%	52%	48%
Manufacturing	89%	11%	30%	70%
Wholesale Trade	97%	3%	58%	42%
Retail Trade	87%	13%	31%	69%
Transportation And Warehousing	95%	5%	29%	71%
Information	96%	3%	17%	83%
Finance And Insurance	97%	3%	48%	52%
Real Estate & Rental And Leasing	99%	1%	78%	22%
Services	98%	2%	49%	51%
Total	97%	3%	45%	55%

Wages:

The labor market endorsement in this report considers the entry-level hourly wages for *general and operations managers* 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.

Typical entry-level wages for *general and operations managers* are \$37.02, which is above the living wage (\$20.63 in Orange County). Orange County's average wages are below the average statewide wage of \$70.90 for this occupation. Exhibit 6 shows the wage range for this occupation in Orange County and how it compares to the regional living wage.

Exhibit 6: Wages by Occupation in Orange County



To better understand the wage dynamics for self-employed workers versus traditionally employed workers, Exhibit 7 shows the entry-level overall, traditional, and self-employed wages for *general and operations managers*.

Self-employed workers have different earnings dynamics than wage and salaried workers, making direct comparisons difficult. Examples include deciphering what is a return to labor versus a return to capital, as well as showing possible negative earnings if expenses or investments exceed gross receipts.² For these reasons, self-employed wage data appears low throughout the region and self-employed entry-level wages for *general and operations managers* are significantly below the living wage, as well as wages for traditionally employed workers.

Exhibit 7: Orange County Wages for General and Operations Managers

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
General and Operations Managers	\$37.02	\$37.39	\$13.83

Exhibit 7 shows the overall entry-level wages for the top 15 middle-skill occupations for self-employment, as well as entry-level wages for traditionally employed and self-employed workers. Of the top 15 middle-skill self-employed occupations, 20% (3) have entry-level wages above the living wage. However, self-employed entry-level wages for all 15 occupations are significantly below the living wage and entry-level wages for traditionally employed workers.

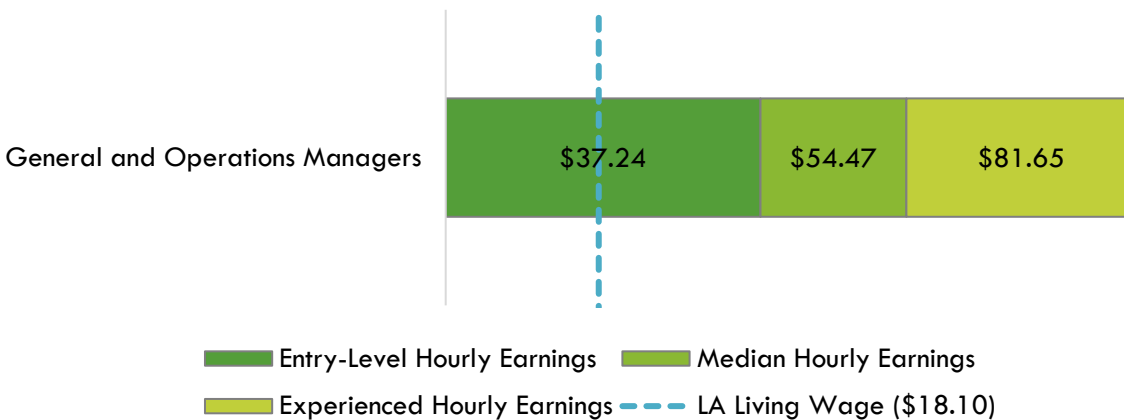
² https://www.brookings.edu/wp-content/uploads/2019/11/201911_Brookings-Metro_low-wage-workforce_Ross-Bateman.pdf

Exhibit 8: Orange County Wages for Top 15 Self-Employed Occupations
(sorted by Total Jobs - per Exhibit 4)

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
Hairdressers, Hairstylists, and Cosmetologists	\$13.66	\$14.37	\$9.34
Real Estate Sales Agents	\$17.90	\$23.44	\$15.44
Real Estate Brokers	\$26.13	\$27.64	\$21.72
Massage Therapists	\$14.91	\$16.37	\$11.71
Photographers	\$14.96	\$19.61	\$12.82
Interpreters and Translators	\$20.09	\$20.93	\$18.21
Jewelers and Precious Stone and Metal Workers	\$14.04	\$16.44	\$6.12
Barbers	\$8.31	\$15.43	\$6.76
Brickmasons and Blockmasons	\$20.65	\$22.66	\$12.25
Animal Trainers	\$14.00	\$14.28	\$7.23
Court Reporters and Simultaneous Captioners	\$23.84	\$29.63	\$20.15
Woodworkers, All Other	\$14.04	\$17.76	\$6.30
Musical Instrument Repairers and Tuners	\$16.55	\$16.60	\$8.74
Desktop Publishers	\$17.74	\$19.95	\$14.03
Watch and Clock Repairers	\$10.76	Insf. Data	\$10.16

Typical entry-level wages for *general and operations managers* are \$37.24, which is above the living wage (\$18.10 in Los Angeles County). Los Angeles County’s average wages are slightly below the average statewide wage of \$70.90 for this occupation. Exhibit 9 shows the wage range for this occupation in Los Angeles County and how it compares to the regional living wage.

Exhibit 9: Wages by Occupation in Los Angeles County



To better understand the wage dynamics for self-employed workers versus traditionally employed workers, Exhibit 10 shows the entry-level overall, traditional, and self-employed wages for *general and operations managers*. Self-employed wage data appears low throughout the region and self-employed entry-level wages for these entrepreneurship occupations are significantly below the living wage as well as wages for traditionally employed workers.

Exhibit 10: Los Angeles County Wages for General and Operations Managers

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
General and Operations Managers	\$37.24	\$37.70	\$13.96

Exhibit 11 shows the overall entry-level wages for the top 15 middle-skill occupations for self-employment, as well as entry-level wages for traditionally employed and self-employed workers. Of the top 15 middle-skill self-employed occupations, 20% (3) have entry-level wages above the living wage. However, self-employed entry-level wages for all 15 occupations are significantly below the living wage and entry-level wages for traditionally employed workers.

Exhibit 11: Los Angeles County Wages for Top 15 Self-Employed Occupations (sorted by Total Jobs - per Exhibit 4)

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
Hairdressers, Hairstylists, and Cosmetologists	\$12.69	\$14.92	\$9.34
Real Estate Sales Agents	\$16.75	\$21.44	\$15.44
Real Estate Brokers	\$24.16	\$25.15	\$21.72
Massage Therapists	\$15.32	\$16.58	\$11.64
Photographers	\$16.02	\$22.39	\$12.71
Interpreters and Translators	\$21.92	\$23.72	\$18.19
Jewelers and Precious Stone and Metal Workers	\$14.75	\$17.50	\$6.15
Barbers	\$7.43	\$16.72	\$6.67
Brickmasons and Blockmasons	\$16.66	\$23.66	\$12.25
Animal Trainers	\$14.10	\$16.57	\$7.26
Court Reporters and Simultaneous Captioners	\$24.19	\$30.71	\$20.05
Woodworkers, All Other	\$12.61	\$17.53	\$6.40
Musical Instrument Repairers and Tuners	\$15.50	\$17.08	\$8.78
Desktop Publishers	\$18.05	\$20.39	\$14.07
Watch and Clock Repairers	\$10.56	Insf. Data	\$10.16

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.³ 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 14,879 online job postings for general and operations managers over the past 12 months, as shown in Exhibit 12. The top job titles were operations managers, general managers, and operations supervisors.

Exhibit 12: Number of Job Postings by Occupation (n=14,879)

Occupation	Job Postings	Percentage of Job Postings
General and Operations Managers	14,879	100%

The top employers in the region, by number of job postings, are shown in Exhibit 13.

Exhibit 13: Top Employers by Number of Job Postings (n=14,879)

Employer	Job Postings	Percentage of Job Postings
CVS Health	356	2%
Dollar Tree	175	1%
University of California	139	1%
Marriott International	111	1%
Lululemon	93	1%
California State University	68	0.5%
Penske Logistics	68	0.5%
Gold's Gym	67	0.5%
Synchrony	61	0.4%
Gap	59	0.4%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 14.

³ K. R. Chowdhary, Fundamentals of Artificial Intelligence (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

Exhibit 14: Top Skills by Number of Job Postings (n=14,879)

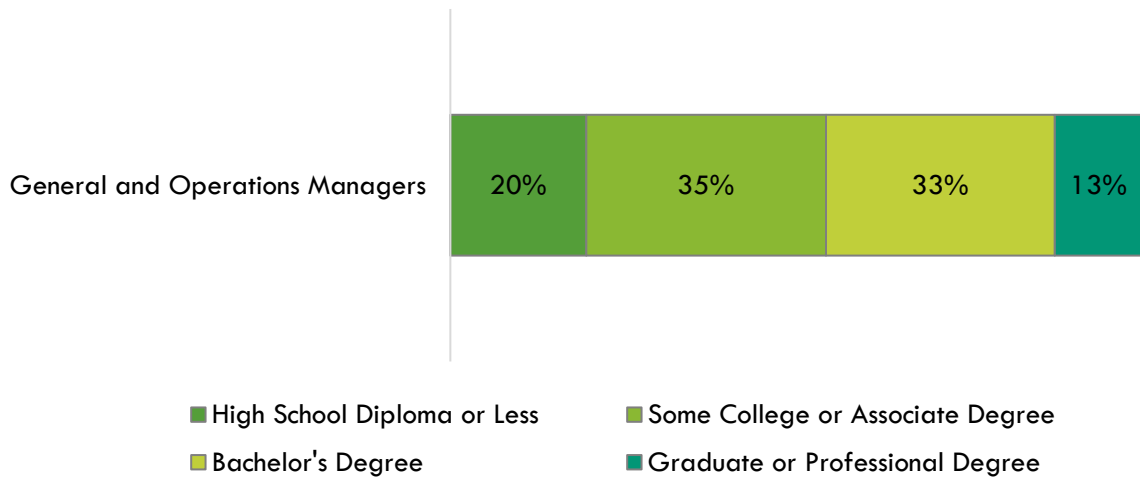
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Operations Management (3,707)	Operations (9,524)	Microsoft Excel (1,830)
Marketing (1,867)	Management (7,523)	Microsoft Office (1,434)
Project Management (1,853)	Communication (6,566)	Microsoft PowerPoint (1,125)
Finance (1,701)	Leadership (6,349)	Microsoft Outlook (954)
Auditing (1,394)	Customer Service (4,955)	Microsoft Word (597)
Key Performance Indicators (KPIs) (1,272)	Sales (4,249)	Salesforce (257)
Accounting (1,137)	Planning (3,137)	Operating Systems (244)
Workflow Management (1,081)	Problem Solving (2,515)	Spreadsheets (238)
Process Improvement (1,074)	Coaching (2,172)	SQL (Programming Language) (205)
Inventory Management (1,001)	Writing (1,854)	Dashboard (199)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a bachelor’s degree as the typical entry-level education for *general and operations managers*. However, the national-level educational attainment data indicates 35% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 15 shows the educational attainment for *general and operations managers*.

Of the 66% of the cumulative job postings for *general and operations managers* that listed a minimum education requirement in Los Angeles/Orange County, 69% (6,787) requested a bachelor’s, master’s, or doctoral degree and 31% (3,023) requested a high school diploma or an associate degree.

Exhibit 15: National-level Educational Attainment for Occupations



Educational Supply

Community College Supply:

Exhibit 16 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Business and Commerce, General (0501.00), 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), and International Business and Trade (0508.00)

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

It is important to note that the educational programs that train for *general and operations managers* also train for an additional 22 occupations that account for over 20,000 job openings. Therefore, the supply figures in Exhibit 16 are overstated.

Exhibit 16: Regional Community College Awards (Certificates and Degrees), 2019-2022

TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
0501.00	Business and Commerce, General	Cerritos	5	4	1	3
		Glendale	46	61	73	60
		LA City	116	50	60	75
		LA Harbor	10	12	12	11
		LA Mission	0	0	1	0
		LA Pierce	17	13	24	18
		LA Southwest	29	29	24	27
		Long Beach	237	189	195	207
		Mt San Antonio	117	117	136	123
		Santa Monica	5	12	14	10
		West LA	44	67	83	65
		LA Subtotal	626	554	623	599
		Coastline	6	5	4	5
		Saddleback	19	39	73	43
		OC Subtotal	25	44	77	48
		Supply Subtotal/Average			651	598
0505.00	Business Administration	Cerritos	250	222	299	256
		Citrus	399	416	386	400
		Compton	29	31	22	27
		East LA	247	391	309	316
		El Camino	306	342	325	324
		Glendale	241	217	221	226

TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
		LA City	91	151	112	118
		LA Harbor	83	87	68	79
		LA Mission	88	89	89	88
		LA Pierce	208	255	266	243
		LA Southwest	56	45	38	46
		LA Trade	7	28	32	22
		LA Valley	147	172	197	172
		Long Beach	293	319	296	303
		Mt San Antonio	269	337	281	296
		Pasadena	1191	1240	859	1097
		Rio Hondo	276	246	254	259
		Santa Monica	334	337	370	347
		West LA	156	134	127	139
		LA Subtotal	4,671	5,059	4,551	4,758
		Coastline	592	432	410	477
		Cypress	244	232	206	227
		Fullerton	373	319	367	353
		Golden West	166	194	186	182
		Irvine	349	299	383	343
		Orange Coast	443	368	412	408
		Saddleback	382	315	327	341
		Santa Ana	220	198	187	201
		Santiago Canyon	157	153	143	151
		OC Subtotal	2,926	2,510	2,621	2,683
		Supply Subtotal/Average	7,597	7,569	7,172	7,441
0506.00	Business Management	Cerritos	516	387	276	393
		East LA	18	17	18	18
		El Camino	33	49	22	35
		Glendale	13	15	28	18
		LA City	39	18	16	25
		LA Mission	1	4	6	4
		LA Pierce	2	7	14	8
		LA Valley	36	30	39	35
		Long Beach	29	44	28	34
		Mt San Antonio	145	150	188	160
		Cerritos	516	387	276	393
		East LA	18	17	18	18

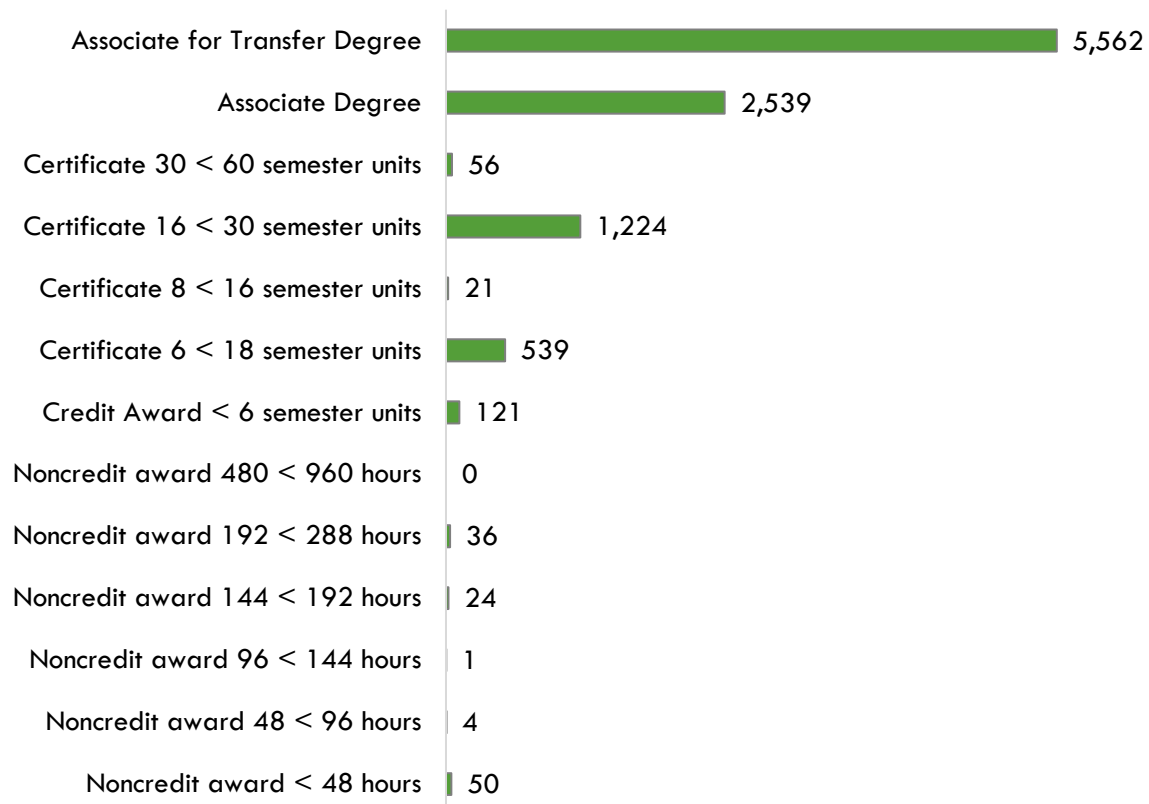
TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
		El Camino	33	49	22	35
		LA Subtotal	832	721	635	730
		Coastline	72	307	33	138
		Cypress	3	7	1	3
		Fullerton	12	11	19	13
		Golden West	8	11	13	10
		Irvine	14	5	23	14
		North Orange Adult	36	19	32	29
		Orange Coast	16	19	16	18
		Santa Ana	71	40	39	50
		Santiago Canyon	24	55	25	34
		OC Subtotal	256	474	201	309
		Supply Subtotal/Average			1,088	1,195
0506.30	Management, Development, and Supervision	Cerritos	32	50	59	47
		LA Pierce	4	5	11	7
		LA Southwest	9	15	21	15
		LA Trade	4	8	12	8
		LA Valley	20	18	17	18
		Pasadena	3	10	6	6
		Rio Hondo	25	18	16	20
		Santa Monica	19	19	30	23
		LA Subtotal	116	143	172	144
		Coastline	247	7	142	132
		Cypress	0	1	11	4
		Irvine	0	3	0	1
		Saddleback	27	53	38	39
		Santa Ana	11	9	9	10
		Santiago Canyon	2	1	1	1
		OC Subtotal	287	74	201	187
		Supply Subtotal/Average			56	82
0506.40	Small Business and Entrepreneurship	Cerritos	38	18	15	23
		Citrus	0	0	1	0
		East LA	4	1	36	13
		Glendale	1	1	0	1
		LA City	5	4	7	6
		LA Pierce	4	6	5	5

TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
		LA Trade	6	9	3	6
		LA Valley	0	0	99	33
		Long Beach	0	2	0	1
		Mt San Antonio	26	19	36	27
		Pasadena	9	22	186	73
		Rio Hondo	6	4	6	5
		Santa Monica	19	22	28	23
		West LA	4	1	5	3
		LA Subtotal	122	109	427	219
		Coastline	4	16	4	8
		Cypress	7	4	0	3
		Fullerton	3	6	5	5
		Golden West	13	2	3	6
		Irvine	56	11	233	100
		Orange Coast	0	0	8	3
		Saddleback	14	8	10	11
		Santa Ana	5	6	1	4
		Santiago Canyon	0	0	1	0
		OC Subtotal	102	53	265	140
		Supply Subtotal/Average	224	162	692	359
0506.50	Retail Store Operations and Management	Cerritos	206	198	192	199
		El Camino	2	2	4	2
		LA City	2	0	1	1
		LA Trade	1	2	1	1
		LA Valley	3	2	5	3
		Mt San Antonio	1	2	1	1
		Pasadena	1	2	9	4
		Rio Hondo	1	3	4	2
		LA Subtotal	217	211	217	213
		Coastline	1	0	0	0
		Golden West	0	0	1	0
		Saddleback	0	2	1	1
		OC Subtotal	1	2	2	1
		Supply Subtotal/Average	56	82	65	67
0508.00	International Business and Trade	Cerritos	15	9	8	11
		East LA	8	6	1	5
		Glendale	5	6	6	5

TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
		LA Harbor	0	3	0	1
		LA Pierce	1	1	0	1
		Long Beach	7	15	15	13
		Mt San Antonio	29	17	32	25
		Pasadena	4	7	23	11
		Rio Hondo	2	3	2	2
		Santa Monica	4	4	3	4
		LA Subtotal	75	71	90	78
		Fullerton	3	2	2	2
		Saddleback	8	5	11	8
		Santa Ana	112	31	30	58
		OC Subtotal	123	38	43	68
Supply Subtotal/Average			10,379	10,063	10,125	10,177

Exhibit 17 shows the annual average community college awards by type from 2019-20 to 2021-22. The majority of the awards are for associate for transfer degrees, followed by associate degrees.

Exhibit 17: Annual Average Community College Awards by Type, 2019-2022



Community College Student Outcomes:

Exhibit 18 shows the Strong Workforce Program (SWP) metrics for small business and entrepreneurship programs in Rancho Santiago Community College District (RSCCD), the Orange County Region, and California. Of the 2,342 small business and entrepreneurship students in the 2020-21 academic year, 10% (143) attended a RSCCD college.

Additionally, RSCCD students that exited small business and entrepreneurship programs in the 2019-20 academic year had higher median annual earnings (\$38,828) compared to all small business and entrepreneurship students in Orange County (\$35,454) and throughout the state (\$35,736).

Exhibit 18: Small Business and Entrepreneurship (0506.40) Strong Workforce Program Metrics, 2020-21⁴

SWP Metric	RSCCD	OC Region	California
SWP Students	143	1,480	9,509
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	36%	33%	32%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Insufficient Data	Insufficient Data	77%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	Insufficient Data	27	526
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	Insufficient Data	82	425
SWP Students with a Job Closely Related to Their Field of Study (2018-19)	Insufficient Data	65%	64%
Median Annual Earnings for SWP Exiting Students (2019-20)	\$38,828 (\$18.67)	\$35,454 (\$17.05)	\$35,736 (\$17.18)
Median Change in Earnings for SWP Exiting Students (2019-20)	9%	31%	22%
SWP Exiting Students Who Attained the Living Wage (2019-20)	41%	38%	47%

⁴ All SWP metrics are for 2020-21 unless otherwise noted.

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 *general and operations managers*. Exhibit 19 shows the annual and two-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), and International Business/Trade/Commerce (52.1101).

Due to different data collection periods, the most recent two-year period of available data is from 2019 to 2021. Between 2019 and 2021, non-community college institutions in the region conferred an average of 12,272 awards annually in related training programs.

It is important to note that the educational programs that train for *general and operations managers* also train for an additional 22 occupations that account for over 20,000 job openings. Therefore, the supply figures in Exhibit 19 Exhibit 16 are overstated.

Exhibit 19: Regional Non-Community College Awards, 2019-2021

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
52.0101	Business/Commerce, General	Azusa Pacific University	16	10	13
		Loyola Marymount University	2	1	2
		Mount Saint Mary's University	0	0	0
Supply Subtotal/Average			18	11	15
52.0201	Business Administration and Management, General	Abraham Lincoln University	0	1	0
		American Jewish University	3	5	4
		Angeles College	6	10	8
		Azusa Pacific University	106	100	103
		Bethesda University	26	28	27
		Biola University	137	122	130
		California Intercontinental University	4	5	5
		California State Polytechnic University-Pomona	1,401	1,644	1,522
		California State University-Dominguez Hills	575	624	600
		California State University-Fullerton	2,374	2,451	2,412
		California State University-Long Beach	1,443	1,557	1,500
California State University-Los Angeles	1,131	865	998		

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		California State University-Northridge	740	806	773
		Chapman University	474	471	472
		Concordia University-Irvine	87	76	82
		Fremont College	1	6	4
		Hope International University	57	35	46
		InterCoast Colleges-Santa Ana	18	0	9
		InterCoast Colleges-West Covina	0	1	0
		Learnet Academy Inc	3	10	6
		Life Pacific University	15	17	16
		Los Angeles Pacific College	7	3	5
		Los Angeles Pacific University	0	4	2
		Loyola Marymount University	29	52	40
		Marymount California University	59	42	50
		Mount Saint Mary's University	51	33	42
		Pacific College	0	0	0
		Pacific Oaks College	7	1	4
		Pacific States University	1	1	1
		Pathways College	0	2	1
		Pepperdine University	185	174	180
		Platt College-Anaheim	14	9	12
		Platt College-Los Angeles	11	4	7
		Presbyterian Theological Seminary in America	0	0	0
		The Master's University and Seminary	64	53	58
		University of Antelope Valley	26	18	22
		University of California-Irvine	306	379	342
		University of La Verne	294	296	295
		University of Massachusetts Global	155	268	211

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
		University of Southern California	1,020	1,035	1,028
		University of the People	205	283	244
		University of the West	7	11	9
		Vanguard University of Southern California	51	66	58
		Westcliff University	71	107	89
		Whittier College	64	64	64
		Woodbury University	21	29	25
Supply Subtotal/Average			11,249	11,768	11,506
52.0701	Entrepreneurship/ Entrepreneurial Studies	Azusa Pacific University	4	3	4
		California Intercontinental University	1	2	2
		Hussian College-Los Angeles	1	0	0
		Loyola Marymount University	70	62	66
		Mount Saint Mary's University	0	1	0
Supply Subtotal/Average			76	68	72
52.0801	Finance, General	California State University-Northridge	402	399	400
		Loyola Marymount University	105	117	111
		Pepperdine University	13	26	20
Supply Subtotal/Average			520	542	531
52.1101	International Business/ Trade/ Commerce	Azusa Pacific University	8	8	8
		California State University-Fullerton	77	72	74
		Mount Saint Mary's University	4	3	4
		Pepperdine University	28	31	30
		University of La Verne	2	3	2
		University of Southern California	46	14	30
Supply Subtotal/Average			165	131	148
Supply Total/Average			12,028	12,520	12,272

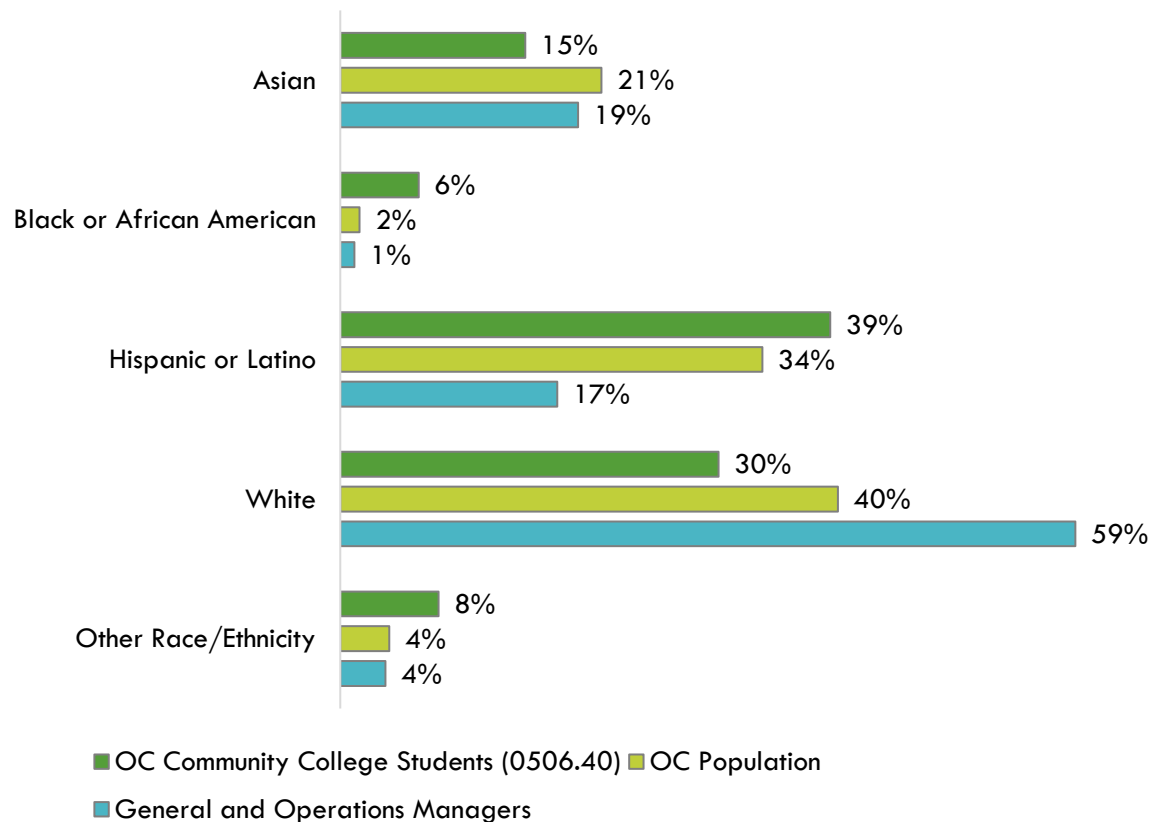
Regional Demographics

This section analyzes demographic data for Orange County community college students enrolled in small business and entrepreneurship 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 20 shows the ethnicity of Orange County community college students enrolled in small business and entrepreneurship programs compared to the overall Orange County population, as well as *general and operations managers*. Notably, 59% of *general and operations managers* are white, which is significantly higher than both the population (40%) and community college small business and entrepreneurship students (30%). Conversely, 39% of community college small business and entrepreneurship students are Hispanic or Latino, which is slightly higher than the population (34%) and double *general and operations managers* (17%).

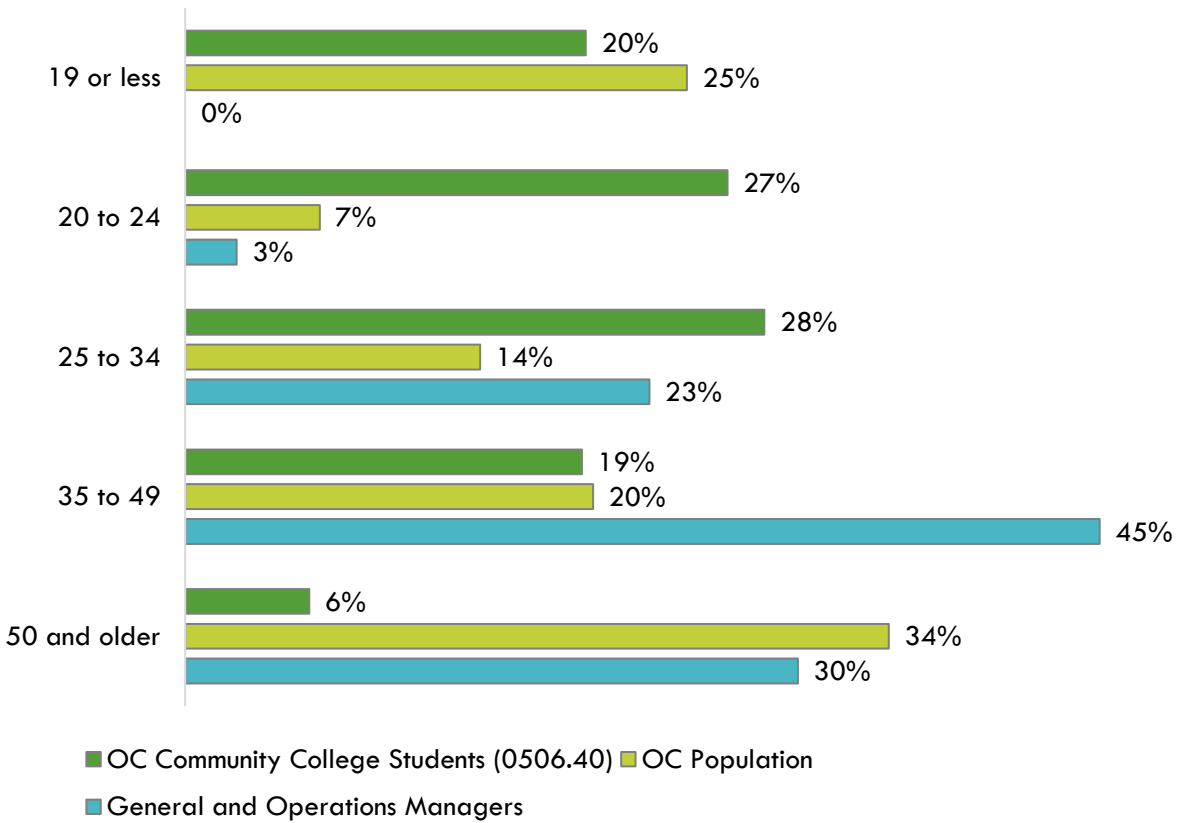
Exhibit 20: Program and County Demographics by Ethnicity



Age:

Exhibit 21 shows the age of Orange County community college students enrolled in small business and entrepreneurship programs compared to the overall Orange County population, as well as *general and operations managers*. Approximately 45% of *general and operations managers* are age 35 to 49, which is more than double the population (20%) and community college small business and entrepreneurship students. Nearly half (47%) of community college small business and entrepreneurship students are 24 or less, which is significantly higher than the population (32%). Both figures are markedly higher than *general and operations managers* (3%).

Exhibit 21: Program and County Demographics by Age

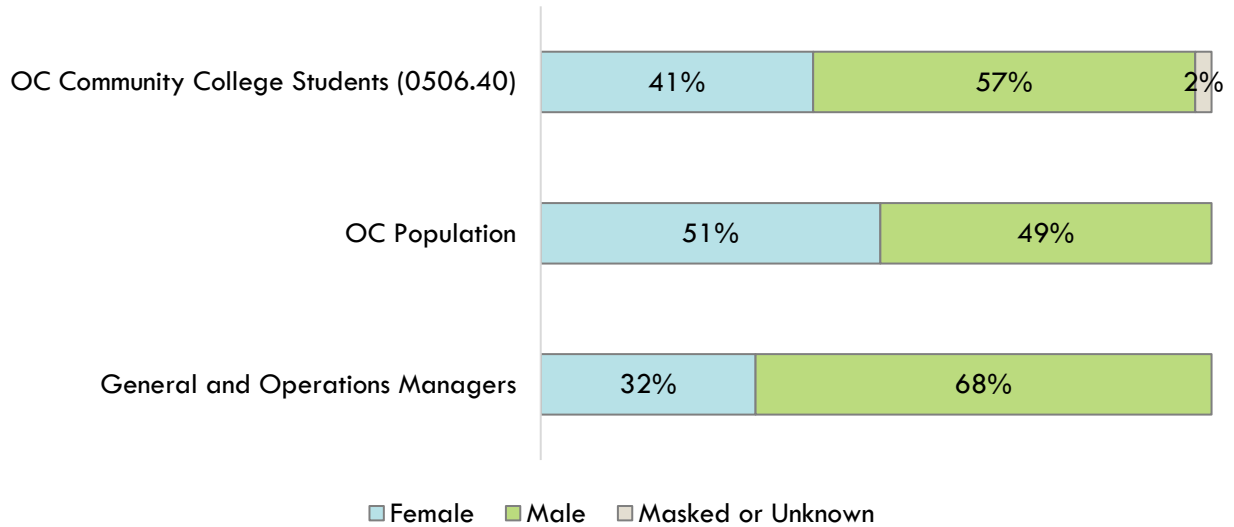


Sex:

Exhibit 22 shows the sex of Orange County community college students enrolled in small business and entrepreneurship programs compared to the overall Orange County population, as well as *general and operations managers*

Though the population is split nearly evenly, the majority of community college small business and entrepreneurship students (57%) and *general and operations managers* (68%) are men.

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) and CIP code data comes from the Integrated Postsecondary Education Data System (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 https://lightcast.io/</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: https://insightccd.org/family-needs-calculator/</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 https://www.bls.gov/emp/documentation/education/tech.htm</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 https://www.onetonline.org/help/online/</p>
Educational Supply	<p>The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu</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 https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</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: https://www.calpassplus.org/LaunchBoard/Home.aspx</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: https://www.census.gov/programs-surveys/acs</p> <p>Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: https://usa.ipums.org/usa/about.shtml</p>

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