

Labor Market Analysis for Noncredit Program Recommendation:
0506.40/Small Business and Entrepreneurship
(Small Business Basics – NC Certificate)
Orange County Center of Excellence, January 2023



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"/>
Program LMI Endorsement Criteria			
	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Supply Gap:	Comments: there is projected to be 15,009 annual job openings throughout Los Angeles and Orange counties for these entrepreneurship occupations, which is more than the 12,278 awards conferred by educational institutions .		
	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Living Wage: (Entry-Level, 25 th)	Comments: All annual job openings for these entrepreneurship occupations have entry-level hourly wages above the OC living wage of \$20.63 .		
	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Education:	Comments: Though all of these entrepreneurship occupations typically require a bachelor's degree, a significant number 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"/>	
Comments: 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 middle-skill occupations:

- General and Operations Managers (11-1021)
- Administrative Services Managers (11-3012)
- Business Operations Specialists, All Other (13-1199)

The occupations included in this report were selected due to their relationship to entrepreneurial business skills, as well as their historical alignment with the 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, entrepreneurship, and photography.

Based on the available data there appears to be a supply gap for these entrepreneurship occupations and typical education requirements for these occupations align with a community college education. However, the majority of annual job openings have entry-level wages below the living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

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

Exhibit 1: Labor Market Endorsement Summary

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25 th Percentile)	Typical Entry-Level Education	Community College Educational Attainment
General and Operations Managers (11-1021)	9,056	12,278	OC: \$36.80	Bachelor's degree	35%
Administrative Services Managers (11-3012)	1,081	Accounted for above	OC: \$37.66	Bachelor's degree	36%
Business Operations Specialists, All Other (13-1199)	4,872	Accounted for above	OC: \$22.67	Bachelor's degree	22%
Total	15,009	12,278	N/A	N/A	N/A

Demand:

- The number of jobs related to these entrepreneurship occupations are projected to increase 1% through 2026, equating to 15,009 annual job openings.
- Hourly entry-level wages for these entrepreneurship occupations range from \$22.67 to \$37.66 in Orange County; all annual job openings have entry-level wages above the living wage.
- There were 32,076 online job postings for these entrepreneurship occupations 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 these entrepreneurship occupations ranges is a bachelor's degree.
- Between 22% and 36% of workers in the field have completed some college or an associate degree as their highest level of educational attainment.

Supply:

- There was an average of 1,320 awards conferred by 27 community colleges in Los Angeles and Orange Counties from 2018 to 2021.
- Non-community college institutions conferred an average of 10,958 awards from 2017 to 2020.
- Orange County community college students that exited small business and entrepreneurship programs in the 2018-2019 academic year had a median annual wage of \$33,504 after exiting the program and 40% attained the regional living wage.
- Throughout Orange County, 78% of small business and entrepreneurship students that exited their program in 2017-18 reported that they are working in a job closely related to their field of study.

Demand

Occupational Projections:

Exhibit 2 shows the annual percent change in jobs for these entrepreneurship occupations from 2016 through 2026. Though there was a 7% decline across all occupations from 2019 to 2020 due to the COVID-19 pandemic, employment in these entrepreneurship occupations declined 2% in Orange County and increased sharply from 2020 to 2021. These entrepreneurship occupations are projected to grow at a similar rate as compared to all occupations through 2026.

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

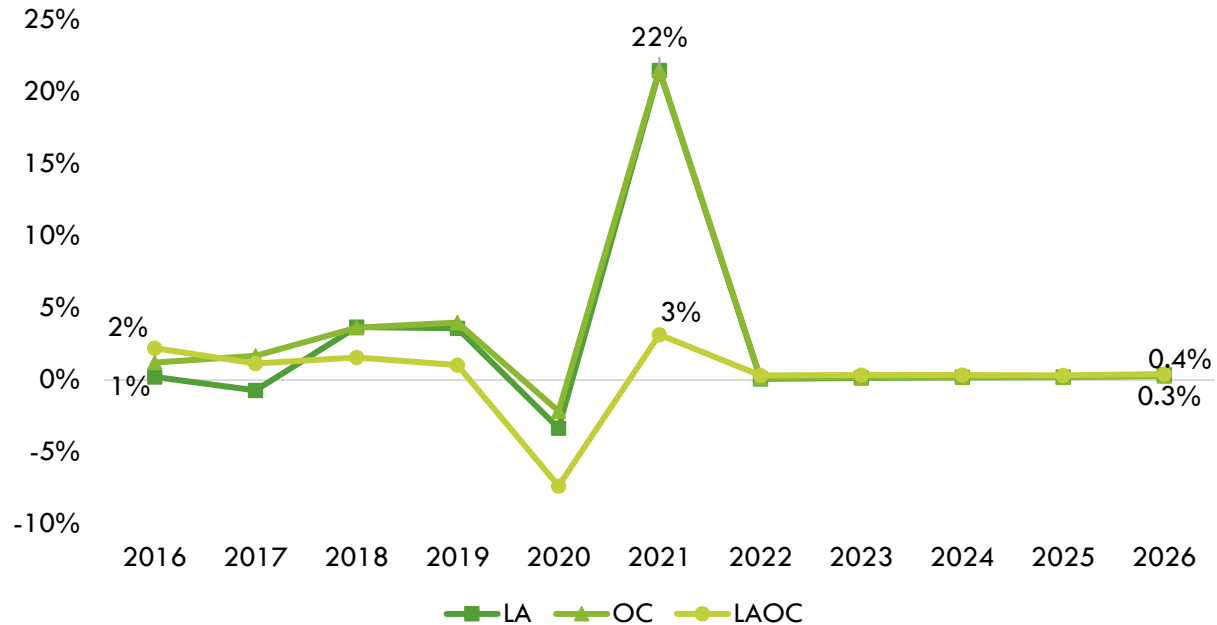


Exhibit 3 shows the five-year occupational demand projections for these entrepreneurship occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 1% through 2026. There is projected to be 15,009 jobs available annually.

Exhibit 3: Occupational Demand in Los Angeles and Orange Counties¹

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	134,932	136,315	1,383	1%	10,857
Orange	51,460	51,999	539	1%	4,152
Total	186,392	188,314	1,922	1%	15,009

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. These 15 occupations have an average self-employment rate of 71%, which is significantly higher than the average of 13% across all occupations. Additionally, community colleges throughout the region have related programs for several of these occupations, including *barbers; photographers; hairdressers, hairstylists, and*

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.

cosmetologists; real estate sales agents; real estate brokers; choreographers; and court reporters and simultaneous captioners.

Exhibit 4: Top Self-Employed Occupations in Los Angeles and Orange Counties

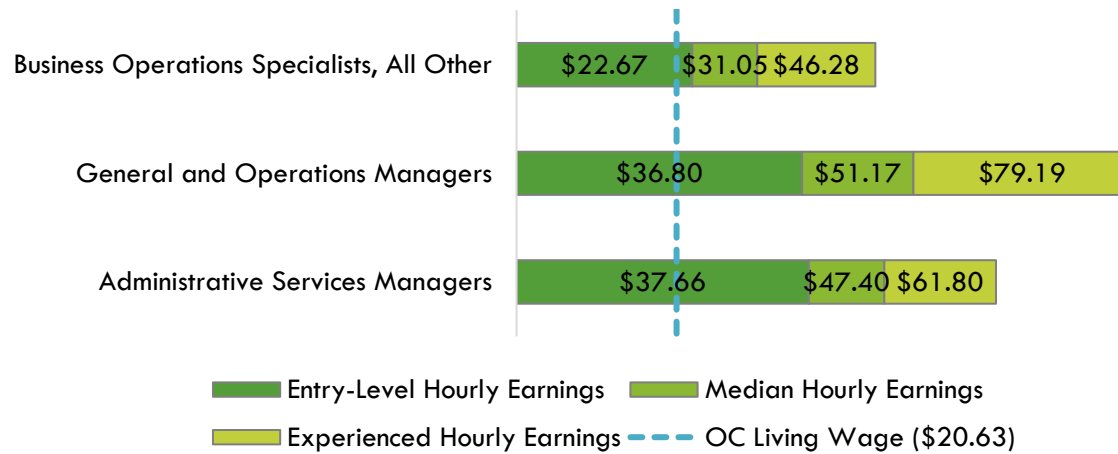
Occupation	2021 Self-Employed Jobs	2021 Employed Jobs	2021 Total Jobs	2021 % Self-Employed
Watch and Clock Repairers	230	21	251	92%
Musical Instrument Repairers and Tuners	267	35	302	89%
Barbers	2,519	425	2,944	86%
Photographers	9,414	2,948	12,362	76%
Hairdressers, Hairstylists, and Cosmetologists	20,705	6,712	27,417	76%
Real Estate Sales Agents	19,618	7,793	27,411	72%
Real Estate Brokers	5,838	2,520	8,359	70%
Choreographers	133	65	197	67%
Massage Therapists	7,833	3,813	11,646	67%
Animal Trainers	946	525	1,471	64%
Woodworkers, All Other	433	248	680	64%
Commercial Divers	59	37	96	62%
Court Reporters and Simultaneous Captioners	636	464	1,100	58%
Interpreters and Translators	2,434	2,128	4,562	53%
Brickmasons and Blockmasons	915	898	1,813	50%

Wages:

The labor market endorsement in this report considers the entry-level hourly wages for these entrepreneurship 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. Wages for the 15 middle-skill occupations with the highest rates of self-employment are also included.

All annual openings for these entrepreneurship occupations have entry-level wages above the living wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages range between \$22.67 and \$37.66. Orange County's average wages are nearly identical to the average statewide wage of \$54.04 for these occupations. Exhibit 5 shows the wage range for each of these entrepreneurship 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



To better understand the wage dynamics for self-employed workers versus traditionally employed workers, Exhibit 6 shows the entry-level overall, traditional, and self-employed wages for these three entrepreneurship occupations. 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 these entrepreneurship occupations are significantly below the living wage as well as wages for traditionally employed workers. On average, self-employed entry-level wages are 43% lower than wages for traditionally employed workers.

Exhibit 6: Orange County Wages for Entrepreneurship Occupations

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
General and Operations Managers	\$36.80	\$37.15	\$13.35
Administrative Services Managers	\$37.66	\$37.74	\$14.16
Business Operations Specialists, All Other	\$22.67	\$22.92	\$12.55

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, 27% (4) 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. On average, self-employed entry-level wages are nearly 70% lower than wages for traditionally employed workers.

Exhibit 7: Orange County Wages for Top 15 Self-Employed Occupations

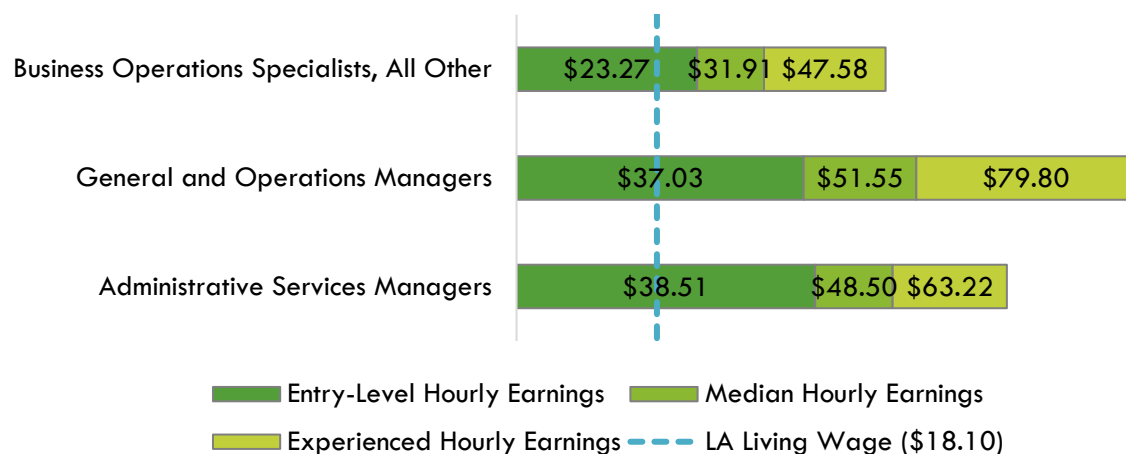
Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
Watch and Clock Repairers	\$13.37	Insf. Data	\$12.32
Musical Instrument Repairers and Tuners	\$11.28	Insf. Data	\$9.99

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

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
Barbers	\$8.26	\$15.97	\$6.84
Photographers	\$14.16	\$15.94	\$12.92
Hairdressers, Hairstylists, and Cosmetologists	\$12.69	\$14.10	\$9.32
Real Estate Sales Agents	\$17.89	\$25.19	\$15.21
Real Estate Brokers	\$21.87	\$24.09	\$19.72
Choreographers	\$17.80	\$17.80	\$11.94
Massage Therapists	\$14.08	\$14.47	\$10.65
Animal Trainers	\$10.76	\$14.04	\$6.88
Woodworkers, All Other	\$11.41	\$14.51	\$6.17
Commercial Divers	\$28.17	Insf. Data	Insf. Data
Court Reporters and Simultaneous Captioners	\$22.37	\$26.53	\$19.34
Interpreters and Translators	\$20.69	\$21.86	\$18.46
Brickmasons and Blockmasons	\$21.45	\$27.95	\$10.95

All annual openings for these entrepreneurship occupations have entry-level wages above the living wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages are in a range between \$23.27 and \$38.51. Los Angeles County's average wages are nearly identical to the average statewide wage of \$54.04 for these occupations. Exhibit 8 shows the wage range for each of these entrepreneurship occupations in Los Angeles County how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

Exhibit 8: Wages by Occupation in Los Angeles County



To better understand the wage dynamics for self-employed workers versus traditionally employed workers, Exhibit 9 shows the entry-level overall, traditional, and self-employed wages for these three entrepreneurship occupations. 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. On average, self-employed entry-level wages are 41% lower than wages for traditionally employed workers.

Exhibit 9: Los Angeles County Wages for Entrepreneurship Occupations

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self-Employed Entry-Level Wages
General and Operations Managers	\$37.03	\$37.47	\$13.42
Administrative Services Managers	\$38.51	\$38.60	\$14.11
Business Operations Specialists, All Other	\$23.27	\$23.51	\$12.62

Exhibit 10 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 but two of these occupations are significantly below the living wage and entry-level wages for traditionally employed workers. On average, self-employed entry-level wages are 93% lower for self-employed workers as compared to traditionally employed workers. Exhibit

Exhibit 10: Los Angeles County Wages for Top 15 Self-Employed Occupations

Occupation	Overall Entry-Level Wages	Employed Entry-Level Wages	Self- Employed Entry-Level Wages
Watch and Clock Repairers	\$13.19	\$21.80	\$12.32
Musical Instrument Repairers and Tuners	\$11.22	\$16.07	\$10.06
Barbers	\$7.43	\$14.81	\$6.77
Photographers	\$14.97	\$18.18	\$12.71
Hairdressers, Hairstylists, and Cosmetologists	\$11.33	\$14.69	\$9.32
Real Estate Sales Agents	\$16.79	\$22.93	\$15.22
Real Estate Brokers	\$20.65	\$21.90	\$19.73
Choreographers	\$17.51	\$20.99	\$11.96
Massage Therapists	\$14.35	\$14.71	\$10.68
Animal Trainers	\$10.57	\$14.93	\$6.90
Woodworkers, All Other	\$9.95	\$14.31	\$6.30
Commercial Divers	\$22.33	\$78.40	\$16.07
Court Reporters and Simultaneous Captioners	\$21.93	\$27.34	\$19.15
Interpreters and Translators	\$21.94	\$24.03	\$18.39
Brickmasons and Blockmasons	\$15.68	\$28.98	\$10.95

Job Postings:

There were 32,076 online job postings related to these entrepreneurship occupations listed in the past 12 months. Exhibit 11 shows the number of job postings by occupation. Over 50% of job postings were for *general and operations managers*. The top job titles were operations managers, general managers, and operations supervisors.

Exhibit 11: Number of Job Postings by Occupation (n=32,076)

Occupation	Job Postings	Percentage of Job Postings
General and Operations Managers	23,643	74%
Business Operations Specialists, All Other	5,049	16%
Administrative Services Managers	3,384	11%

Occupation	Job Postings	Percentage of Job Postings
Total Postings	32,076	100%

The top employers in the region, by number of job postings, are shown in Exhibit 12.

Exhibit 12: Top Employers by Number of Job Postings (n=32,076)

Employer	Job Postings	Percentage of Job Postings
Elevance Health	767	2%
CVS Health	383	1%
Target	346	1%
Disney	306	1%
University of California	269	1%
Amazon	238	1%
Dollar Tree	219	1%
NBC	214	1%
Marriott International	209	1%
University of Southern California	172	1%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 13.

Exhibit 13: Top Skills by Number of Job Postings (n=32,076)

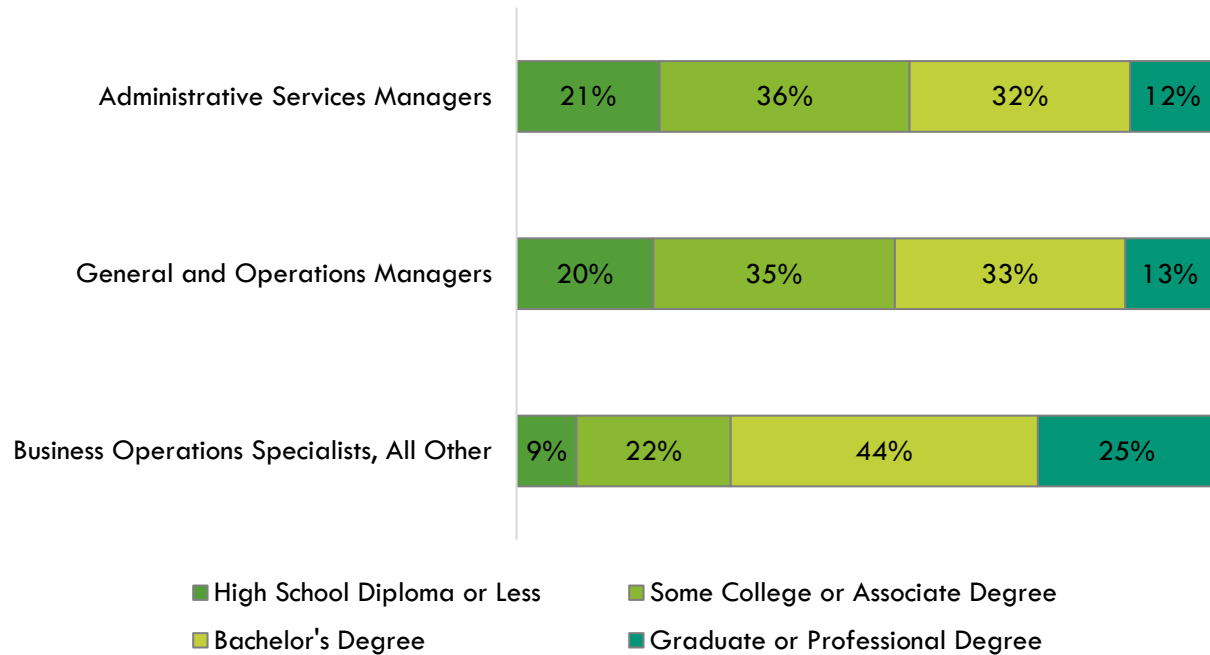
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Operations Management (6,314)	Operations (18,184)	Microsoft Excel (5,711)
Marketing (5,842)	Management (17,259)	Microsoft Office (4,260)
Finance (4,185)	Communications (16,901)	Microsoft PowerPoint (3,463)
Auditing (3,652)	Leadership (13,425)	Microsoft Outlook (2,548)
Accounting (3,238)	Customer Service (11,023)	Microsoft Word (1,780)
Key Performance Indicators (KPIs) (3,129)	Sales (9,173)	SQL (Programming Language) (674)
Workflow Management (2,650)	Planning (7,729)	Microsoft Access (597)
Process Improvement (2,384)	Problem Solving (6,745)	SAP Applications (582)
Merchandising (2,381)	Detail Oriented (6,219)	Google Workspace (564)
Warehousing (2,007)	Microsoft Excel (5,711)	Tableau (462)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a bachelor's degree for all three entrepreneurship occupations. The national-level educational attainment data indicates between 22% and 36% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 14 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Of the 66% of the cumulative job postings for these entrepreneurship occupations that listed a minimum education requirement in Los Angeles/Orange County, 65% (14,082) requested a bachelor's degree and 31% (6,557) requested a high school diploma or associate degree.

Exhibit 14: National-level Educational Attainment for Occupations



Educational Supply

Community College Supply:

Exhibit 15 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Business Management (0506.00) and Small Business and Entrepreneurship (0506.40). The colleges with the most completions in the region are: Cerritos, Mt. San Antonio, and Coastline. Over the past 12 months, there was one other related program recommendation request from regional community colleges.

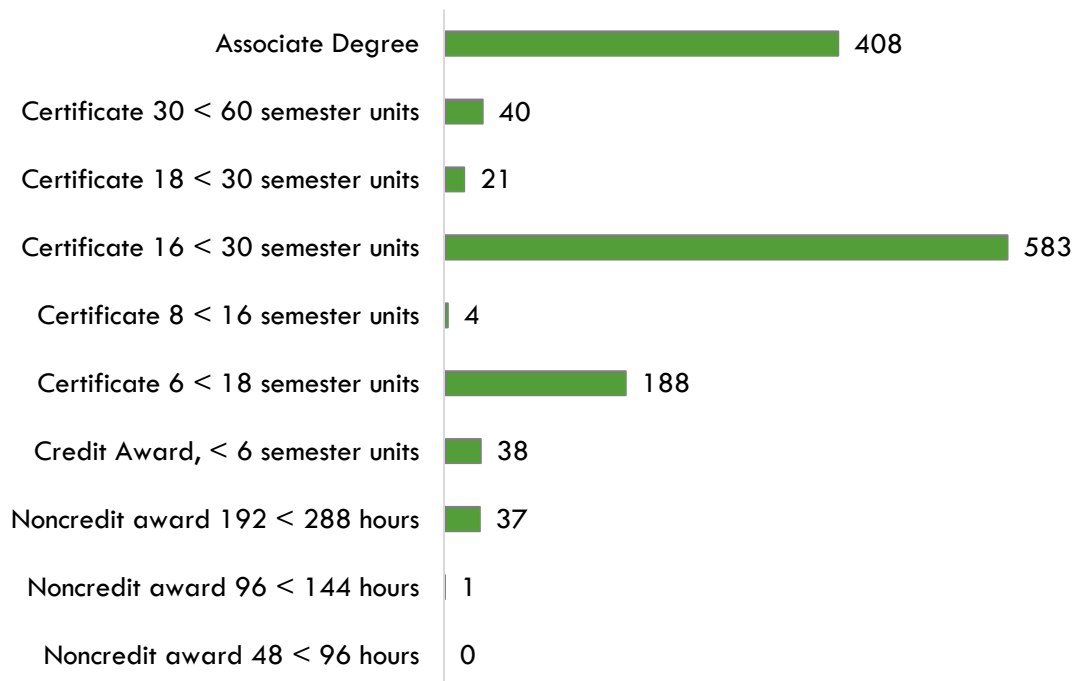
Exhibit 15: Regional Community College Awards (Certificates and Degrees), 2018-2021

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
0506.00	Business Management	Cerritos	456	516	387	453
		Citrus	2	0	0	1
		Compton	3	0	0	1
		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
		LA Subtotal	825	832	721	794
		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
		OC Subtotal	272	256	474	333
		Supply Subtotal/Average	1,097	1,088	1,195	1,127
0506.40		Cerritos	34	38	18	30
		Citrus	2	0	0	1

TOP Code	Program	College	2018- 2019 Awards	2019- 2020 Awards	2020- 2021 Awards	3-Year Award Average
	Small Business and Entrepreneurship	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
		LA Subtotal	109	122	109	116
		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
		OC Subtotal	78	102	53	77
	Supply Subtotal/Average		187	224	162	193
	Supply Total/Average		1,284	1,312	1,357	1,320

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

Exhibit 16: Annual Average Community College Awards by Type, 2018-2021



Community College Student Outcomes:

Exhibit 17 shows the Strong Workforce Program (SWP) metrics for small business and entrepreneurship programs in Coast Community College District (CCCD), the Orange County Region, and California. Of the 1,955 small business and entrepreneurship students in the 2019-20 academic year, 56% (1,101) attended a CCCD college.

Additionally, CCCD students that exited entrepreneurship programs in the 2018-19 academic year had a significantly higher median change in earnings (51%) as compared to all small business and entrepreneurship students in Orange County (29%) and statewide (18%).

Exhibit 17: Small Business and Entrepreneurship (0506.40) Strong Workforce Program Metrics, 2019-20³

SWP Metric	CCCD	OC Region	California
SWP Students	1,101	1,955	8,809
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	24%	25%	31%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Insufficient Data	Insufficient Data	64%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	Insufficient Data	24	471

³ All SWP metrics are for 2019-20 unless otherwise noted.

SWP Metric	CCCD	OC Region	California
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2018-19)	48	90	344
SWP Students with a Job Closely Related to Their Field of Study (2017-18)	100%	78%	64%
Median Annual Earnings for SWP Exiting Students (2018-19)	\$31,608 (\$15.20)	\$33,504 (\$16.11)	\$31,328 (\$15.06)
Median Change in Earnings for SWP Exiting Students (2018-19)	51%	29%	18%
SWP Exiting Students Who Attained the Living Wage (2018-19)	39%	40%	46%

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 entrepreneurship occupations. Exhibit 18 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Codes: Business Administration and Management, General (52.0201) and Entrepreneurship/Entrepreneurial Studies (52.0701). Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, non-community college institutions in the region conferred an average of 10,958 awards annually in related training programs.

Exhibit 18: Regional Non-Community College Awards, 2017-2020

TOP Code	Program	College	2018-2019 Awards	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
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	1465	1191	1401	1352

TOP Code	Program	College	2018- 2019 Awards	2019- 2020 Awards	2020- 2021 Awards	3-Year Award Average
		California State University-Dominguez Hills	569	559	575	568
		California State University-Fullerton	2,174	2,366	2,374	2,305
		California State University-Long Beach	1,326	1,325	1,443	1,365
		California State University-Los Angeles	1,028	1,072	1,131	1,077
		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
		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

TOP Code	Program	College	2018- 2019 Awards	2019- 2020 Awards	2020- 2021 Awards	3-Year Award Average
		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
		Supply Subtotal/Average	10,641	10,766	11,249	10,886
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
		Loyola Marymount University	74	66	70	70
		Mount Saint Mary's University	0	1	0	0

TOP Code	Program	College	2018- 2019 Awards	2019- 2020 Awards	2020- 2021 Awards	3-Year Award Average
		Pitzer College	0	1	0	0
Supply Subtotal/Average			75	68	76	72
Supply Total/Average			10,716	10,834	11,325	10,958

Regional Demographics

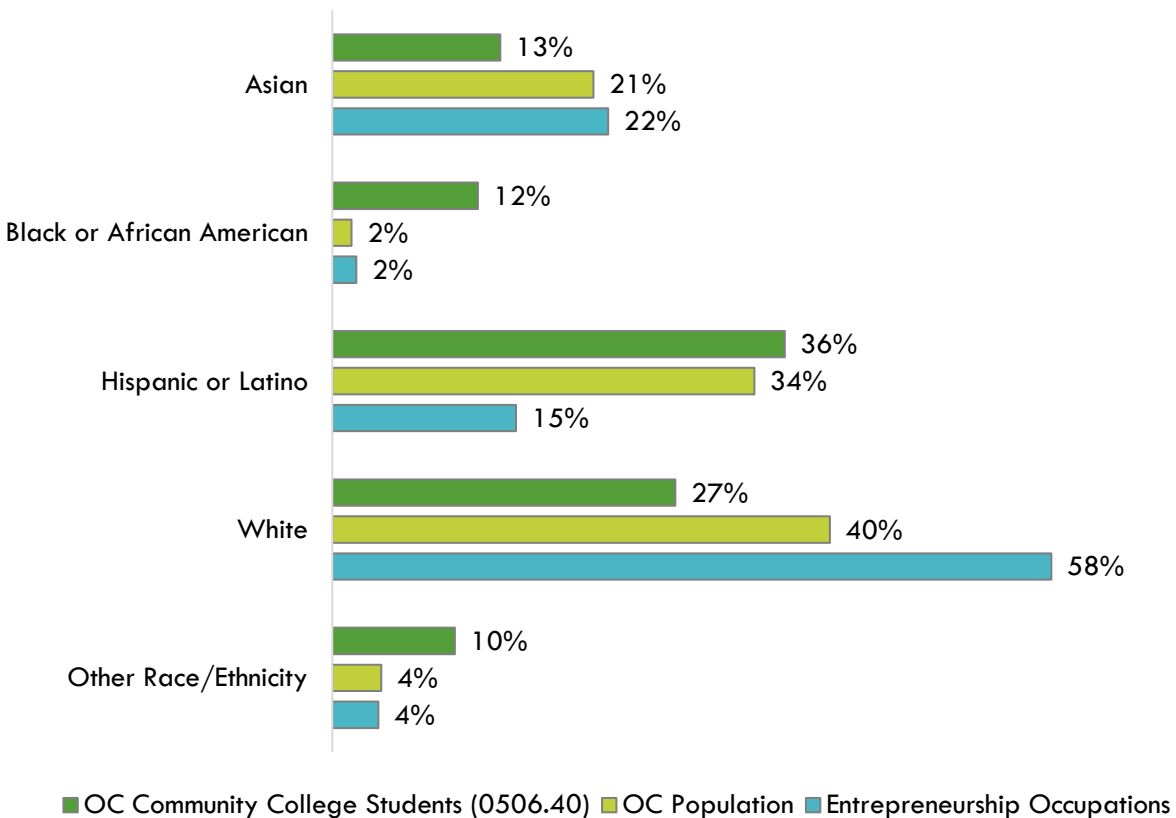
This section analyzes demographic data for Orange County community college students enrolled in entrepreneurship programs compared to the OC population, as well occupational data, for the purpose of identifying potential diversity and equity issues that can be addressed by community college programs.

Ethnicity:

Exhibit 19 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 the three entrepreneurship occupations included in this report. Notably, 58% of workers employed in these entrepreneurship occupations are White, which is much higher than the population (40%) and community college small business and entrepreneurship students (27%).

Examining disaggregated data for each occupation (not shown), all three entrepreneurship occupations have similar demographics with no notable variations.

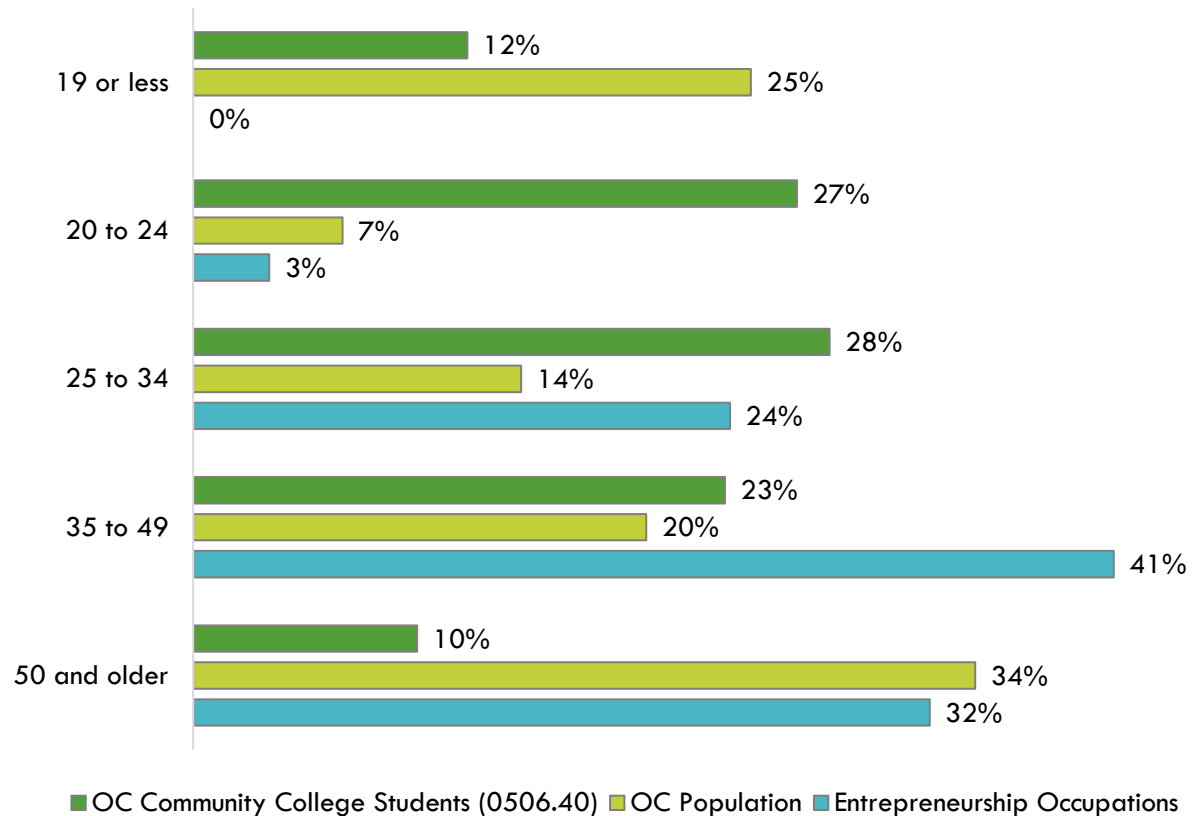
Exhibit 19: Program and County Demographics by Ethnicity



Age:

Exhibit 20 shows the age of Orange County community college students enrolled in small business entrepreneurship programs compared to the overall Orange County population, as well as the three entrepreneurship occupations included in this report. Over 40% of workers in these entrepreneurship occupations are age 35 to 49, which is significantly higher than the population (20%) and community college small business entrepreneurship students (23%).

Exhibit 20: Program and County Demographics by Age

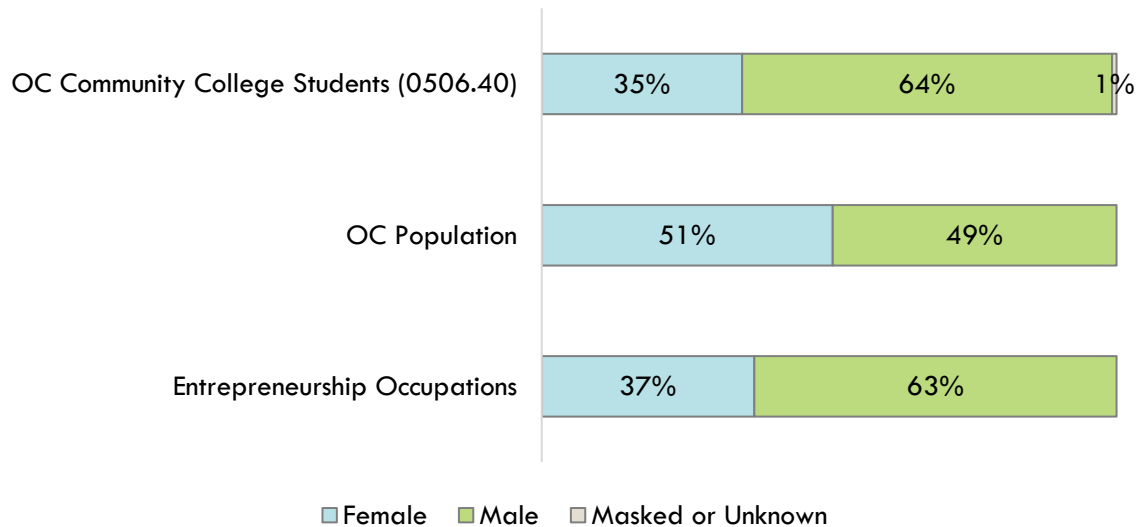


Sex:

Exhibit 21 shows the sex of Orange County community college students enrolled in small business entrepreneurship programs compared to the overall Orange County population as well as these entrepreneurship occupations.

Though the population is split nearly evenly, there is a higher percentage of male small business entrepreneurship students (64%) and workers in these entrepreneurship occupations (63%)

Exhibit 21: Program and County Demographics by Sex



Appendix A: Methodology A

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	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/
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://insightcced.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	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
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	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/
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	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

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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