

# Entrepreneurship – Private Sector Leadership

*Inland Empire/Desert Region (Riverside and San Bernardino counties)*

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*This workforce demand report uses state and federal job projection data developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.*

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## Summary

- Community college entrepreneurship programs provide the knowledge, skills, and abilities that prepare students for employment in five bachelor degree-level leadership occupations.
- Combined, these occupations are projected to have 4,224 annual job openings through 2025, increasing employment by 7% across all industries.
- The median hourly earnings for these occupations are between \$32.91 and \$77.35 per hour, above the regional \$24.36 per hour self-sustainable wage standard for a single adult with one child.
- Regional community college programs related to entrepreneurship have issued 1,406 awards annually over the last three academic years. One other postsecondary educational institution has issued one award annually over the last three academic years.
- The COE recommends expanding entrepreneurship programs to meet the demand for workers in the region. See the [recommendation section](#) for further detail.

## Introduction

The Bureau of Labor Statistics broadly defines entrepreneurs as individuals that "discover new and imaginative ways to combine factors of production and bear the risks of the free market with hopes of creating a profitable enterprise" (Cooksey et al., 2017). The three California Community College programs that provide training for entrepreneurship occupations are business administration (TOP 0505.00), business management (0506.00), and small business and entrepreneurship (0506.40).

This report quantifies the demand for private sector management jobs that may benefit from entrepreneurship training. Entrepreneurs are unique individuals who utilize various knowledge, skills, and abilities to establish new business ventures that do not yet exist. The Indeed Career Guide classifies eleven hard and soft skills an entrepreneur needs to accommodate the various business roles they will take on, build their business, and develop leadership skills (Indeed, 2021).

1. Business management skills
2. Teamwork and leadership skills
3. Communication and listening skills

4. Customer service skills
5. Financial skills
6. Analytical and problem-solving skills
7. Critical thinking skills
8. Strategic thinking and planning skills
9. Technical skills
10. Time management and organizational skills
11. Branding, marketing, and networking skills

As a result, this report identifies five management occupations based on the Indeed Career Guide entrepreneurial hard and soft skills, collectively referred to as the entrepreneurship group. These occupations may also require job-specific skills training that is available outside of an entrepreneurship program. The entrepreneurship group occupations are:

- Administrative Services and Facilities Managers (SOC 11-3011)
- Chief Executives (11-1011)
- General and Operations Managers (11-1021)
- Project Management Specialists and Business Operations Specialists, All Other (13-1198)
- Sales Managers (11-2022)

The labor market data in this report is limited to private industries, where entrepreneurs generate economic value; the agriculture, forestry, fishing, and hunting (NAICS 11) and the public administration sectors (NAICS 92) were removed from this report.

## Job Counts and Projections

In 2020, there were 37,172 combined entrepreneurship jobs in the region's private sector industries. Combined employment in this group is expected to rise by 8% through 2025 in the private sector and is projected to have 4,224 annual job openings across all industries.

Between 1% and 38% of incumbent workers in the entrepreneurship group are self-employed. Chief executives are most likely to be self-employed, with approximately 38% of workers self-employed. Exhibit 1 displays the job counts, five-year projected job growth, job openings, percentage of self-employment, and the share of incumbent workers age 55 years and greater working in the entrepreneurship group.

Exhibit 1: Five-year projections for the entrepreneurship group, 2020-2025

Occupation	2020 Jobs	2025 Jobs	5-Yr % Change (New Jobs)	Annual Openings (New + Replacement Jobs)*	% of workers age 55+	% of Self-employed
General and Operations Managers	17,222	18,779	9%	1,771	24%	2%
Project Management Specialists and Business Operations Specialists, All Other	10,976	11,843	8%	1,600	25%	2%
Sales Managers	4,667	4,857	4%	407	20%	4%
Administrative Services and Facilities Managers	2,030	2,199	8%	265	35%	1%
Chief Executives	2,277	2,343	3%	180	43%	38%
<b>Total</b>	<b>37,172</b>	<b>40,021</b>	<b>8%</b>	<b>4,224</b>	<b>26%</b>	<b>4%</b>

Source: Emsi 2021.3

\*Annual job openings for entrepreneurship occupations employed in all industries

Exhibit 2 shows the number of job ads posted during the last 12 months and the regional and statewide average time filling each occupation in private sector industries. Despite this effort to quantify real-time demand for entrepreneurs, job advertisements do not provide much insight into regional demand for entrepreneurs because entrepreneurs are self-employed and create their own job opportunities.

Over the last 12 months, there were 5,518 advertisements posted for the entrepreneurship group within private industries in the region. On average, regional employers fill online job ads for these occupations within 37 days. The regional time to fill is three days shorter than the statewide average time to fill, indicating regional employers may face fewer challenges filling open positions than other employers in California.

Exhibit 2: Job ads and time to fill

Occupation	Job Ads	Regional Average Time to Fill (Days)	Statewide Average Time to Fill (Days)
General and Operations Managers	2,848	35	39
Sales Managers	1,838	38	41
Project Management Specialists and Business Operations Specialists, All Other	424	39	40
Administrative Services and Facilities Managers	351	37	40
Chief Executives	57	43	44
<b>Total</b>	<b>5,518</b>	<b>37</b>	<b>40</b>

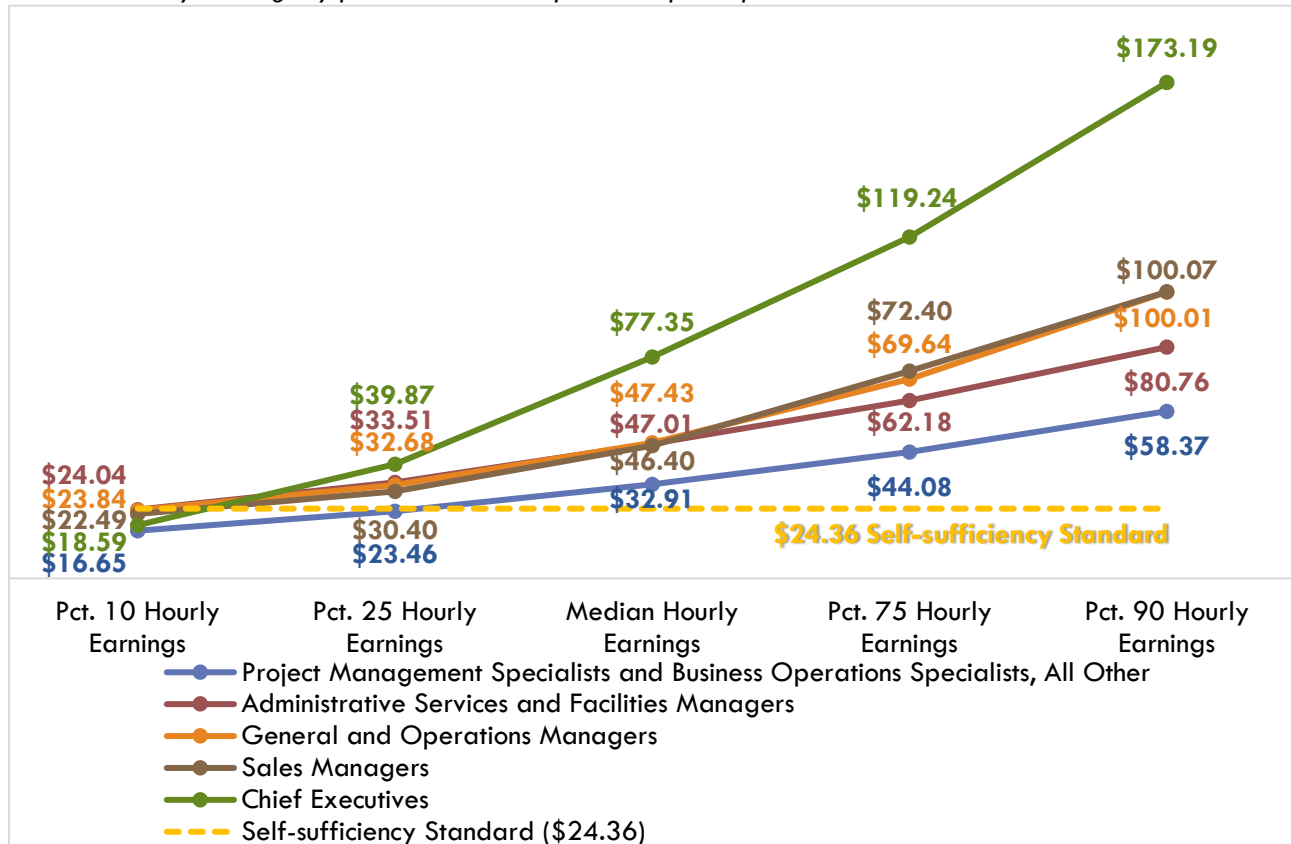
Source: Burning Glass – Labor Insights

## Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide self-sustainable income. The University of Washington estimates that a self-sufficient hourly rate for a single adult with one school-age child is \$24.36 per hour or \$51,452 annually in Riverside County; \$23.73 per hour or \$50,119 annually in San Bernardino County (Pearce, 2021). For this study, the higher hourly earnings requirement in Riverside County is adopted as the self-sufficiency standard for the two-county region.

Exhibit 3 displays the hourly earnings for the entrepreneurship occupational group. The 25<sup>th</sup> percentile hourly earnings for all of the occupations, except project management specialists and business operations specialists, all other, surpass the self-sufficiency standard. The median hourly earnings for project management specialists and business operations specialists, all other exceed the self-sufficiency standard.

Exhibit 3: Hourly earnings by percentile for entrepreneurship occupations



Source: Emsi 2021.3

Benefits information, provided by the California Labor Market Information Division's occupational guides, is only available for sales managers and general and operations managers. These occupations can expect performance bonuses in addition to medical and dental insurance (Detailed Occupational Guides, 2021).

## Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for the entrepreneurship group over the last 12 months in the Inland Empire/Desert Region. Online job ad salary information reveals that employers are willing to pay this occupational group between \$45,000 and \$108,000 annually. Except for project management and business operations specialists, all other advertised salaries in this occupational group are above the region's \$51,452 annual (\$24.36 hourly) self-sufficiency standard. Consider the salary information with caution since only 32% (1,773 out of 5,518) of online job postings for these occupations provided salary information. The salary figures are prorated to reflect full-time, annual wage status.

Exhibit 4: Advertised salary information

Occupations	Real-Time Salary Information					Average Annual Salary
	Number of job postings	Less than \$35,000	\$35,000 to \$49,999	\$50,000 to \$74,999	More than \$75,000	
General and Operations Managers	707	6%	21%	40%	33%	\$74,000
Sales Managers	606	6%	14%	36%	44%	\$75,000
Project Management Specialists and Business Operations Specialists, All Other	296	28%	51%	14%	7%	\$45,000
Administrative Services and Facilities Managers	149	7%	44%	24%	25%	\$62,000
Chief Executives	15	6%	7%	7%	80%	\$108,000

Source: Burning Glass – Labor Insights

## Employers, Skills, Education, and Work Experience

Exhibit 5 displays the employers that posted the most job ads during the last 12 months in the Inland Empire/Desert Region. Displaying employer names provides some insight into where students may find employment after completing a program. Overall, Anthem Blue Cross posted the most advertisements for the entrepreneurship group over the last 12 months.

Exhibit 5: Employers posting the most job ads for the entrepreneurship group

Occupation	Top Employers
General and Operations Managers (n=2,784)	<ul style="list-style-type: none"> <li>Anthem Blue Cross</li> <li>XPO Logistics</li> <li>DHL Express</li> <li>San Manuel Casino</li> <li>FedEx</li> <li>Amazon</li> </ul>
Sales Managers (n=1,773)	<ul style="list-style-type: none"> <li>Anthem Blue Cross</li> <li>Wells Fargo</li> <li>Carters Incorporated</li> </ul>

Occupation	Top Employers	
Project Management Specialists and Business Operations Specialists, All Other (n=416)	<ul style="list-style-type: none"> <li>Anthem Blue Cross</li> <li>Cosmo Appliances</li> <li>BevMo!</li> </ul>	<ul style="list-style-type: none"> <li>Monarch International Inc.</li> <li>JE Machine Tech</li> <li>Esri</li> </ul>
Administrative Services and Facilities Managers (n=404)	<ul style="list-style-type: none"> <li>Anthem Blue Cross</li> <li>San Manuel Casino</li> </ul>	
Chief Executives (n=55)	<ul style="list-style-type: none"> <li>Anthem Blue Cross</li> <li>UnitedHealth Group</li> <li>San Manuel Casino</li> </ul>	

Source: Burning Glass – Labor Insights

Exhibit 6 lists a sample of specialized and employability skills employers seek when looking for workers to fill positions in the entrepreneurship group. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job postings may be utilized to guide curriculum development. Approximately 24% of job ads for this group sought candidates with Microsoft Office skills. Microsoft Office represents a suite of Microsoft products, including Word, Excel, Outlook, PowerPoint, and others.

Exhibit 6: Sample of in-demand skills from employer job ads

Occupation	Specialized skills	Employability skills
General and Operations Managers (n=2,729)	<ul style="list-style-type: none"> <li>Budgeting</li> <li>Scheduling</li> <li>Customer Service</li> <li>Staff Management</li> <li>Supervisory Skills</li> </ul>	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Planning</li> <li>Problem Solving</li> <li>Teamwork/Collaboration</li> <li>Organizational Skills</li> </ul>
Sales Managers (n=1,789)	<ul style="list-style-type: none"> <li>Sales Goals</li> <li>Customer Service</li> <li>Business Development</li> <li>Budgeting</li> <li>Product Sales</li> </ul>	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Building Effective Relationships</li> <li>Teamwork/Collaboration</li> <li>Problem Solving</li> <li>Organizational Skills</li> </ul>
Project Management Specialists and Business Operations Specialists, All Other (n=409)	<ul style="list-style-type: none"> <li>E-Commerce</li> <li>Digital Marketing</li> <li>Social Media</li> <li>Sales</li> <li>Customer Service</li> </ul>	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Detail-Oriented</li> <li>Organizational Skills</li> <li>Teamwork/Collaboration</li> <li>Writing</li> </ul>
Administrative Services and Facilities Managers (n=396)	<ul style="list-style-type: none"> <li>Budgeting</li> <li>Scheduling</li> <li>Staff Management</li> <li>Office Management</li> <li>Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Planning</li> <li>Organizational Skills</li> <li>Problem Solving</li> <li>Teamwork/Collaboration</li> </ul>

Occupation	Specialized skills	Employability skills
Chief Executives (n=45)	<ul style="list-style-type: none"> <li>Budgeting</li> <li>Staff Management</li> <li>Financial Management</li> <li>Business Planning</li> <li>Business Administration</li> </ul>	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Planning</li> <li>Leadership</li> <li>Teamwork/Collaboration</li> <li>Problem Solving</li> </ul>

Source: Burning Glass – Labor Insights

Exhibit 7 displays the typical entry-level education, educational attainment, and minimum advertised education requirements for the entrepreneurship group. According to the Bureau of Labor Statistics, between 19%-35% of incumbent workers in this field hold a community college-level of educational attainment; "some college, no degree" and an "associate degree." Job advertisements indicate that the majority of employers sought candidates with a bachelor's degree or higher.

Exhibit 7: Typical entry-level education, educational attainment, and minimum advertised education requirements

Occupation	Typical Entry-Level Education Requirement	CC-Level Educational Attainment*	Number of Job Ads	Real-Time Minimum Advertised Education Requirement		
				High school or vocational training	Associate degree	Bachelor's degree or higher
General and Operations Managers	Bachelor's degree	34%	2,196	34%	5%	61%
Sales Managers	Bachelor's degree	29%	1,288	25%	4%	71%
Project Management Specialists and Business Operations Specialists, All Other	Bachelor's degree	22%	301	37%	7%	56%
Administrative Services and Facilities Managers	Bachelor's degree	35%	255	40%	12%	48%
Chief Executives	Bachelor's degree	19%	40	5%	3%	92%

Source: Emsi 2021.3, Burning Glass – Labor Insights

\*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Exhibit 8 displays the work experience typically required to enter each occupation and the real-time work experience requirements from employer job ads. Job advertisements indicate that previous work experience is important to employers seeking workers in the entrepreneurship group.

Exhibit 8: Work experience required and real-time work experience requirements

Occupation	Work Experience Typically Required	Real-Time Work Experience			
		Number of job postings	0 – 2 years	3 – 5 years	6+ years
General and Operations Managers	5 years or more	2,167	28%	52%	20%
Sales Managers	Less than 5 years	1,324	34%	49%	17%
Project Management Specialists and Business Operations Specialists, All Other	None	238	52%	37%	11%
Administrative Services and Facilities Managers	Less than 5 years	239	28%	48%	24%
Chief Executives	5 years or more	31	6%	36%	58%

Source: Emsi 2021.3, Burning Glass – Labor Insights

## Student Completions for Entrepreneurship Programs

Skills training related to public sector management and entrepreneurship is covered in the following California Community College TOP programs:

- Business Administration (TOP 0505.00)
- Business Management (TOP 0506.00)
- Small Business and Entrepreneurship (TOP 0506.40)

All three programs equip students with the requisite skills to succeed in business leadership and administration; the small business and entrepreneurship program provides the most direct entrepreneur training. Over the last three academic years, regional community colleges issued 1,406 awards annually in these three entrepreneurship-related programs. Exhibits 9, 11, and 13 display completion data for community college entrepreneur programs in the region. The student completion and outcome methodology are available on page 17.

Community college **business administration (TOP 0505.00)** programs are designed to give a broad, balanced introduction to professional careers in business, usually including business law, economics, mathematics, managerial accounting, and computer systems (Taxonomy of Programs, 2012). Exhibit 9 displays student completions for business administration programs (0505.00) over the last three academic years. Chaffey College has issued the most awards in business administration programs over the last three academic years in the region.



Exhibit 9: 2017-20, Annual average community college awards for business administration programs in the Inland Empire/Desert Region

TOP 0505.00 – Business Administration	Associate Degree	Associate for Transfer Degree	Certificate requiring 30 to < 60-semester units	Certificate requiring 18 to < 30-semester units	Certificate requiring 16 to < 30-semester units	Total CC Annual Average Awards, Academic Years 2017-20
Barstow	-	25	-	-	-	25
Chaffey	22	250	8	2	5	287
Copper Mountain	9	13	-	-	-	22
Crafton Hills	-	59	-	-	-	59
Desert	1	150	-	-	-	151
Moreno Valley	-	53	-	-	-	53
Mt. San Jacinto	48	161	6	-	3	217
Norco	-	95	-	-	-	95
Palo Verde	11	4	-	-	-	16
Riverside	-	156	-	-	-	156
San Bernardino	20	117	-	1	-	138
Victor Valley	-	4	-	-	-	4
<b>Total</b>	<b>111</b>	<b>1,088</b>	<b>14</b>	<b>3</b>	<b>8</b>	<b>1,224</b>

Source: MIS Data Mart

California program outcome data may provide a useful insight into the likelihood of success for the proposed program. Community college student outcome information for the business administration program is provided in Exhibit 10. The outcome methodology is available in the appendix section of this report.

Exhibit 10: 0505.00 – Business administration strong workforce program outcomes

Strong Workforce Program Metrics: 0505.00 – Business Administration Academic Year 2017-18, unless noted otherwise	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2018-19)	3,557	45,009
Completed 9+ career education units in one year (2018-19)	43%	35%
Perkins Economically disadvantaged students (2018-19)	86%	73%
Students who attained a noncredit workforce milestone in a year (2018-19)	-	8%
Students who earned a degree, certificate, or attained apprenticeship (2018-19)	1,082	14,083

<b>Strong Workforce Program Metrics: 0505.00 – Business Administration Academic Year 2017-18, unless noted otherwise</b>	<b>Inland Empire/Desert Region</b>	<b>California</b>
Transferred to a four-year institution (transfers)	418	4,664
Job closely related to the field of study (2016-17)	80%	72%
Median annual earnings (all exiters)	\$29,408	\$32,428
Median change in earnings (all exiters)	47%	41%
Attained a living wage (completers and skills-builders)	60%	50%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Community college **business management (TOP 0506.00)** programs prepare students in planning, organizing, directing, and controlling business operations. Includes various theories, tools, and practical applications used to maintain business sustainability through the management of capital, financial, and human resources (Taxonomy of Programs, 2012). Exhibit 11 displays the program completions for business management programs in the region. Riverside City College has issued the most awards for business management programs in the region.

*Exhibit 11: 2017-20, Annual average community college awards for business management programs in the Inland Empire/Desert Region*

<b>TOP 0506.00 – Business Management</b>	<b>Associate Degree</b>	<b>Certificate requiring 30 to &lt; 60-semester units</b>	<b>Certificate requiring 18 to &lt; 30-semester units</b>	<b>Certificate requiring 16 to &lt; 30-semester units</b>	<b>Certificate requiring 6 to &lt; 18-semester units</b>	<b>Total CC Annual Average Awards, Academic Years 2017-20</b>
Barstow	16	-	1	0	-	17
Chaffey	16	-	9	6	-	31
Crafton Hills	5	1	-	-	-	5
Moreno Valley	5	5	-	-	-	10
Mt. San Jacinto	7	3	-	2	-	12
Norco	3	5	-	-	-	8
Riverside	28	37	-	-	1	66
Victor Valley	-	4	-	-	-	4
<b>Total</b>	<b>80</b>	<b>55</b>	<b>10</b>	<b>9</b>	<b>1</b>	<b>154</b>

Source: MIS Data Mart

Community college student outcome information for the business management program is provided in Exhibit 12.

*Exhibit 12: 0506.00 – Business management strong workforce program outcomes*

<b>Strong Workforce Program Metrics: 0506.00 – Business Management Academic Year 2017-18, unless noted otherwise</b>	<b>Inland Empire/Desert Region</b>	<b>California</b>
Unduplicated count of enrolled students (2018-19)	3,731	38,289
Completed 9+ career education units in one year (2018-19)	32%	35%
Perkins Economically disadvantaged students (2018-19)	88%	77%
Students who attained a noncredit workforce milestone in a year (2018-19)	-	28%
Students who earned a degree, certificate, or attained apprenticeship (2018-19)	120	1,426
Transferred to a four-year institution (transfers)	228	3,261
Job closely related to the field of study (2016-17)	78%	75%
Median annual earnings (all exiters)	\$28,442	\$34,828
Median change in earnings (all exiters)	29%	27%
Attained a living wage (completers and skills-builders)	58%	56%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Community college **small business and entrepreneurship (TOP 0506.40)** programs prepare students in the principles, practices, and strategies of small business wholesale, retail, or service operations for owners/managers, and marketing principles and methods applicable to developing businesses (Taxonomy of Programs, 2012). Exhibit 13 displays the program completions for small business and entrepreneurship programs in the region.

*Exhibit 13: 2017-20, Annual average community college awards for small business and entrepreneurship programs in the Inland Empire/Desert Region*

<b>TOP 0506.40 – Small Business and Entrepreneurship</b>	<b>Associate Degree</b>	<b>Certificate requiring 30 to &lt; 60- semester units</b>	<b>Certificate requiring 18 to &lt; 30- semester units</b>	<b>Certificate requiring 16 to &lt; 30- semester units</b>	<b>Certificate requiring 6 to &lt; 18- semester units</b>	<b>Total CC Annual Average Awards, Academic Years 2017-20</b>
Chaffey	6	-	2	1	-	9
Mt. San Jacinto	-	0	-	1	-	1
Norco	-	-	-	-	0	0

TOP 0506.40 – Small Business and Entrepreneurship	Associate Degree	Certificate requiring 30 to < 60-semester units	Certificate requiring 18 to < 30-semester units	Certificate requiring 16 to < 30-semester units	Certificate requiring 6 to < 18-semester units	Total CC Annual Average Awards, Academic Years 2017-20
Palo Verde	-	-	-	-	8	8
Riverside	4	-	3	2	0	9
<b>Total</b>	<b>10</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>9</b>	<b>27</b>

Source: MIS Data Mart

Community college student outcome information for the small business and entrepreneurship program is provided in Exhibit 14.

*Exhibit 14: 0506.40 – Small business and entrepreneurship strong workforce program outcomes*

Strong Workforce Program Metrics: 0506.40 – Small Business and Entrepreneurship Academic Year 2017-18, unless noted otherwise	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2018-19)	560	7,914
Completed 9+ career education units in one year (2018-19)	26%	31%
Perkins Economically disadvantaged students (2018-19)	85%	76%
Students who attained a noncredit workforce milestone in a year (2018-19)	-	45%
Students who earned a degree, certificate, or attained apprenticeship (2018-19)	14	429
Transferred to a four-year institution (transfers)	22	287
Job closely related to the field of study (2016-17)	57%	71%
Median annual earnings (all exiters)	\$24,628	\$28,740
Median change in earnings (all exiters)	29%	30%
Attained a living wage (completers and skills-builders)	49%	46%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Exhibit 15 displays awards reported by other postsecondary education providers in entrepreneurship/entrepreneurial studies (CIP 52.0701) programs. Completion data is compiled from the Integrated Postsecondary Education Data System (IPEDS) for the most recent three years available. On average, one other postsecondary education institution in the region issued one award annually.

*Exhibit 15: Other educational provider entrepreneurship/entrepreneurial studies programs, three-year annual average credentials in the Inland Empire/Desert Region*

52.0701 – Entrepreneurship/Entrepreneurial Studies	Bachelor's degree	Other Educational Providers Annual Average Credentials, Academic Years 2016-19
California Baptist University	1	1
<b>Total</b>	<b>1</b>	<b>1</b>

Source: IPEDS

## Recommendation for Entrepreneurship Programs

The occupations in the entrepreneurship group are expected to have 4,224 annual job openings and increase employment by 8% across all industries over the next five years. The median hourly earnings for this group are between \$32.91 and \$77.35, surpassing the \$24.36 per hour self-sustainable wage standard.

Community college programs related to entrepreneurship have issued 1,406 awards annually over the last three academic years. The median annual earnings for entrepreneurship program completers in the region are between \$24,628 and \$29,408. One other postsecondary educational institution in the region, California Baptist University, has issued one bachelor's degree in an entrepreneurship program over the last three academic years.

The COE recommends expanding existing entrepreneurship programs to meet the regional need for more workers in this field. Community college program completers will likely need to transfer to a four-year educational institution to obtain a bachelor's degree before entering employment. Colleges considering this program should partner with four-year educational institutions and local employers to ensure their training provides the skills needed to transfer to a four-year educational institution and obtain a job in this field.

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## Appendix: Occupation definitions, sample job titles, five-year projections, and earnings for entrepreneurship occupations

### **Occupation Definitions (SOC code), Education and Training Requirement, Community College Education Attainment**

#### **Chief Executives (11-1011)**

Determine and formulate policies and provide overall direction of companies or private and public sector organizations within guidelines set up by a board of directors or similar governing body. Plan, direct, or coordinate operational activities at the highest level of management with the help of subordinate executives and staff managers.

**Sample job titles:** Chief Diversity Officer (CDO), Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Nursing Officer, Chief Operating Officer (COO), Executive Director, Executive Vice President (EVP), Operations Vice President (Operations VP)

*Entry-Level Educational Requirement: Bachelor's degree*

*Training Requirement: None*

*Work Experience: Five years or more*

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 35%*

#### **General and Operations Managers (11-1021)**

Plan, direct, or coordinate the operations of public or private sector organizations, overseeing multiple departments or locations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Excludes First-Line Supervisors.

**Sample job titles:** Business Manager, General Manager (GM), Operations Director, Operations Manager, Plant Superintendent, Store Manager

*Entry-Level Educational Requirement: Bachelor's degree*

*Training Requirement: None*

*Work Experience: Five years or more*

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 34%*

### **Sales Managers (11-2022)**

Plan, direct, or coordinate the actual distribution or movement of a product or service to the customer.

Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.

**Sample job titles:** District Sales Manager, National Sales Manager, Regional Sales Manager, Sales and Marketing Vice President (Sales and Marketing VP), Sales Director, Sales Manager, Sales Supervisor, Sales Vice President (Sales VP), Store Manager

*Entry-Level Educational Requirement: Bachelor's degree*

*Training Requirement: None*

*Work Experience: Less than five years*

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 29%*

### **Administrative Services and Facilities Managers (11-3011)**

Plan, direct, or coordinate one or more administrative services of an organization, such as records and information management, mail distribution, and other office support services.

**Sample job titles:** Administrative Coordinator, Administrative Director, Administrative Manager, Administrative Officer, Administrator, Business Administrator, Business Manager, Facilities Manager

*Entry-Level Educational Requirement: Bachelor's degree*

*Training Requirement: None*

*Work Experience: Less than five years*

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 35%*

### **Project Management Specialists and Business Operations Specialists, All Other (13-1198)**

Analyze and coordinate the schedule, timeline, procurement, staffing, and budget of a product or service on a per project basis. Lead and guide the work of technical staff. May serve as a point of contact for the client or customer.

**Sample job titles:** Business Continuity Specialists, Customs Broker

*Entry-Level Educational Requirement: Bachelor's degree*

*Training Requirement: None*

*Work Experience: None*

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 22%*



## Appendix: Methodology

Exhibits 9, 11, and 13 display the average annual California Community College (CCC) awards conferred during the three academic years between 2017 and 2020, from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from records provided by California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2021 a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS), administered by Santa Rosa Junior College (LaunchBoard, 2021 a).

Job advertisement data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job advertisements often do not reveal employers' hiring intentions; it is unknown if employers plan to hire one or multiple workers from a single online job ad or collect resumes for future hiring needs. A closed job ad may not be the result of a hired worker.

Table 1. 2020 to 2025 job growth, wages, entry-level education, training, and work experience required for the entrepreneurship group in the private sector

Occupation (SOC)	2020 Jobs	% of Total Jobs in Private Sector	5-Year Change (New Jobs)	5-Year % Change (New Jobs)	Entry-Experienced Hourly Wage (10 <sup>th</sup> to 90 <sup>th</sup> percentile)	Median Hourly Wage (50 <sup>th</sup> percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
General and Operations Managers (11-1021)	17,222	92%	1,557	9%	\$23.84 to \$100.01	\$47.43	\$118,500	Bachelor's degree & None	5 years or more
Project Management Specialists and Business Operations Specialists, All Other (13-1198)	10,976	71%	866	8%	\$16.65 to \$58.37	\$32.91	\$74,200	Bachelor's degree & None	None
Sales Managers (11-2022)	4,667	99%	191	4%	\$22.49 to \$100.07	\$46.40	\$118,500	Bachelor's degree & None	Less than 5 years
Chief Executives (11-1011)	2,277	84%	66	3%	\$18.59 to \$173.19	\$77.35	\$185,600	Bachelor's degree & None	5 years or more
Administrative Services and Facilities Managers (11-3011)	2,030	71%	170	8%	\$24.04 to \$80.76	\$47.01	\$103,600	Bachelor's degree & None	Less than 5 years
<b>Private Industry Total</b>	<b>37,172</b>	<b>84%</b>	<b>2,849</b>	<b>8%</b>	-	-	-	-	-

Source: Emsi 2021.3

Table 2. 2020 to 2025 job growth, wages, entry-level education, training, and work experience required for the entrepreneurship group in all industries

Occupation (SOC)	2020 Jobs	5-Year Change (New Jobs)	5-Year % Change (New Jobs)	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10 <sup>th</sup> to 90 <sup>th</sup> percentile)	Median Hourly Wage (50 <sup>th</sup> percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
General and Operations Managers (11-1021)	18,703	1,648	9%	1,771	\$23.84 to \$100.01	\$47.43	\$118,500	Bachelor's degree & None	5 years or more
Project Management Specialists and Business Operations Specialists, All Other (13-1198)	15,514	1,101	7%	1,600	\$16.65 to \$58.37	\$32.91	\$74,200	Bachelor's degree & None	None
Sales Managers (11-2022)	4,701	192	4%	407	\$22.49 to \$100.07	\$46.40	\$118,500	Bachelor's degree & None	Less than 5 years
Administrative Services and Facilities Managers (11-3011)	2,871	220	8%	265	\$24.04 to \$80.76	\$47.01	\$103,600	Bachelor's degree & None	Less than 5 years
Chief Executives (11-1011)	2,697	59	2%	180	\$18.59 to \$173.19	\$77.35	\$185,600	Bachelor's degree & None	5 years or more
<b>Total</b>	<b>44,487</b>	<b>3,219</b>	<b>7%</b>	<b>4,224</b>	-	-	-	-	-

Source: Emsi 2021.3