






San Bernardino Community College District

Program Demand Gap Analysis: Environmental Scan and Review of Academic Programs

Main Report

August 2024

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Acknowledgements

Lightcast gratefully acknowledges the excellent support of the faculty and staff at San Bernardino Community College District for making this study possible. Special thanks go to Diana Z. Rodriguez, Chancellor, who approved the study, and to Rena O'Sullivan, PhD, Research Analyst; Myung Koh, PhD, Senior Research Analyst; Christopher Crew, PhD, Executive Director, Office of Research Planning, and Institutional Effectiveness, who collected much of the data and information requested. Any errors in the report are the responsibility of Lightcast and not that of any of the above-mentioned individuals.



Lightcast provides colleges and universities with labor market data that helps create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Lightcast to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni's employment outcomes, and demonstrate their institution's economic impact on their region. Visit lightcast.io/solutions/education to learn more or connect with us.



Executive Summary

San Bernardino Community College District (SBCCD) is comprised of two public, two-year postsecondary educational institutions in California: San Bernardino Valley College (SVBC) and Crafton Hills College (CHC). To further the district’s goal of providing the region with well-trained and well-educated residents, SBCCD continually pursues improvement in various forms. An up-to-date understanding of the regional economy and the demand for skilled labor is vital to the planning efforts of the district as it seeks to adapt its program offerings to the requirements of an ever-changing workforce. SBCCD partnered with Lightcast, a leading provider of labor market data, to complete a program demand gap analysis, which assesses regional job openings against educational program completions.



RECOMMENDATIONS

Opportunities for Growth

How can we expand these program opportunities?

- Business Administration & Management, General (CERT, ASSOC & T-T)
- Welding Technology/Welder (CERT & ASSOC)
- Manufacturing Engineering Technology/Technician (CERT)
- Automobile/Automotive Mechanics Technology/Technician (CERT)
- Diesel Mechanics Technology/Technician (CERT)
- Electrical & Power Transmission Installation/Installer, General (CERT & ASSOC)
- Early Childhood Education & Teaching (T-T)
- Spanish Language & Literature (T-T)

Focus on Program Quality

Can we maintain focus on program quality & student success?

- Criminal Justice/Police Science (CERT, ASSOC & T-T)
- Information Technology (ASSOC)
- Chemistry, General (ASSOC)
- Registered Nursing/Registered Nurse (ASSOC)
- Psychology, General (T-T)
- Biology/Biological Sciences, General (T-T)

Low Activity Programs

Should we reevaluate these programs?

- Foodservice Systems Administration/Management (CERT)
- Dietitian Assistant (CERT)
- Astronomy (ASSOC)
- Radio & Television Broadcasting Technology/Technician (ASSOC)

Communicate with Industry Partners

Are we connecting these programs to opportunities outside the region?

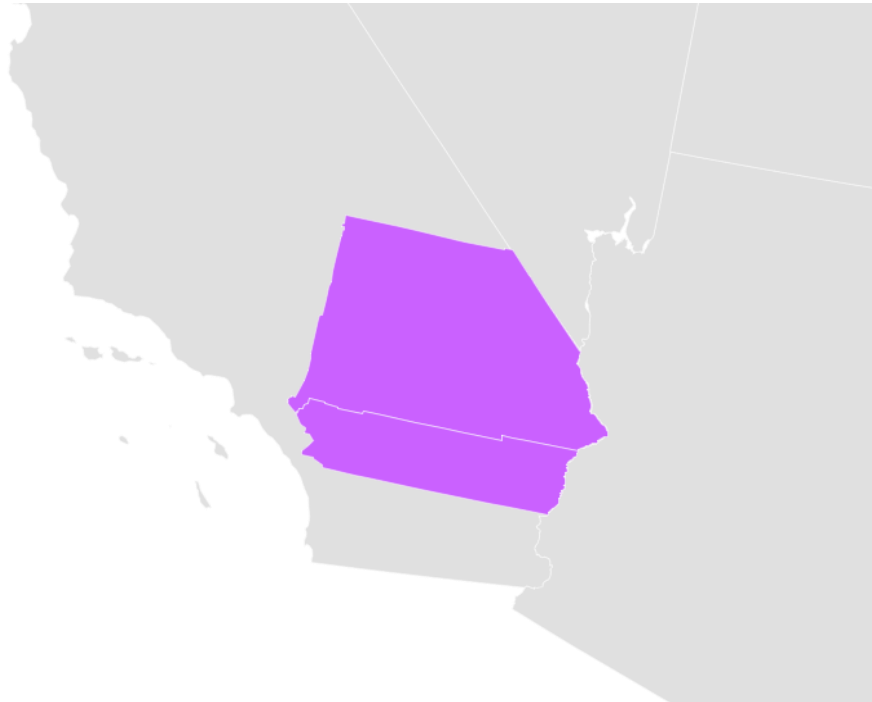
- EMT Paramedic) (CERT)
- Psychology, General (ASSOC)
- Biological & Physical Sciences (ASSOC)
- Sociology, General (T-T)

Source: Lightcast program demand gap model.

INTRODUCTION

For the purposes of the program demand gap analysis, SBCCD serves a region, called the Inland Empire, which is comprised of Two counties in California: San Bernardino, Riverside. This report outlines the region’s economy and uses the region’s average annual projected job openings between 2023 and 2033 as a measurement of labor market demand. When job openings are compared to the region’s supply of educational program completions, the analysis determines how well SBCCD’s program offerings satisfy regional workforce demand. In addition, this report offers recommendations for new program development. In its entirety, the analysis is a starting point for SBCCD as the college continues to develop programs using data-based decision-making strategies. The following figures and table display key findings of the analyses.

Figure 1: Map of the Inland Empire



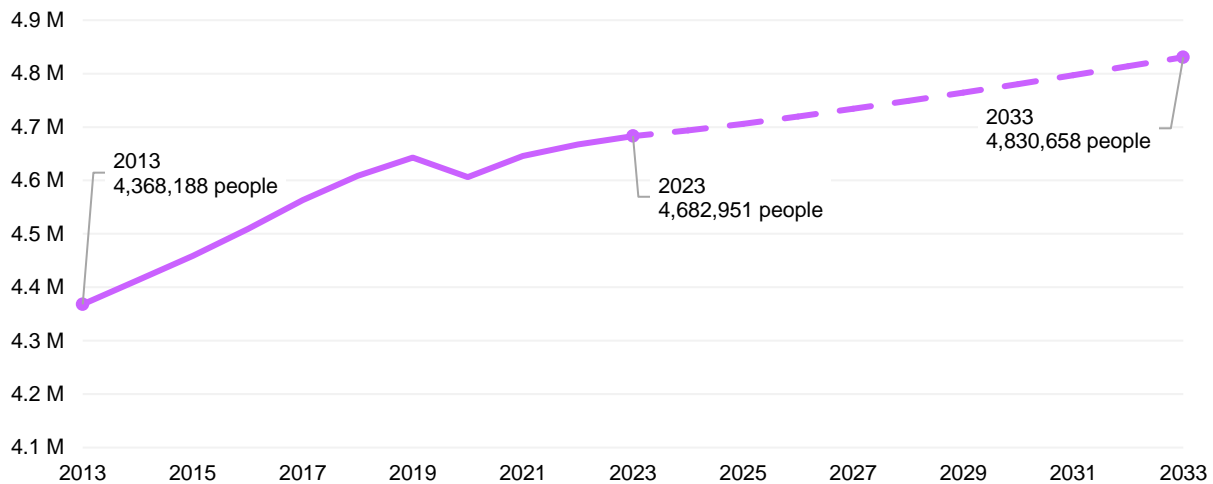
Region definition provided by San Bernardino Community College District.



ENVIRONMENTAL SCAN

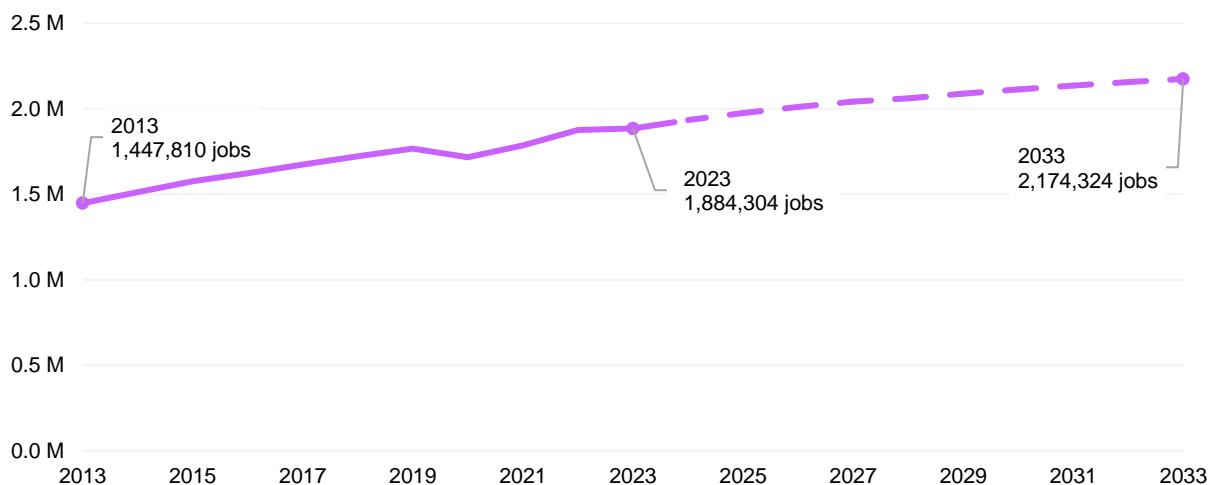
In 2013, 4.4 million people lived in the Inland Empire, and 4.8 million people are projected to live in the region by 2033 (Figure 2). As shown in Figure 3, the Inland Empire supported 1.4 million jobs in 2013. By 2023, that number increased to 1.9 million jobs for an increase of 30.1%. The impact of the Covid-19 pandemic is clearly illustrated in Figure 3 by the loss of jobs from 2019 to 2020. However, jobs in the Inland Empire recovered well from 2020 to 2021 and are projected to continue growing over the next ten years at a similar pace to the rate of growth before the pandemic.

Figure 2: Historical and Projected Population in the Inland Empire, 2013 to 2033



Source: Lightcast demographics data, U.S. Census Bureau, U.S. Health Department.

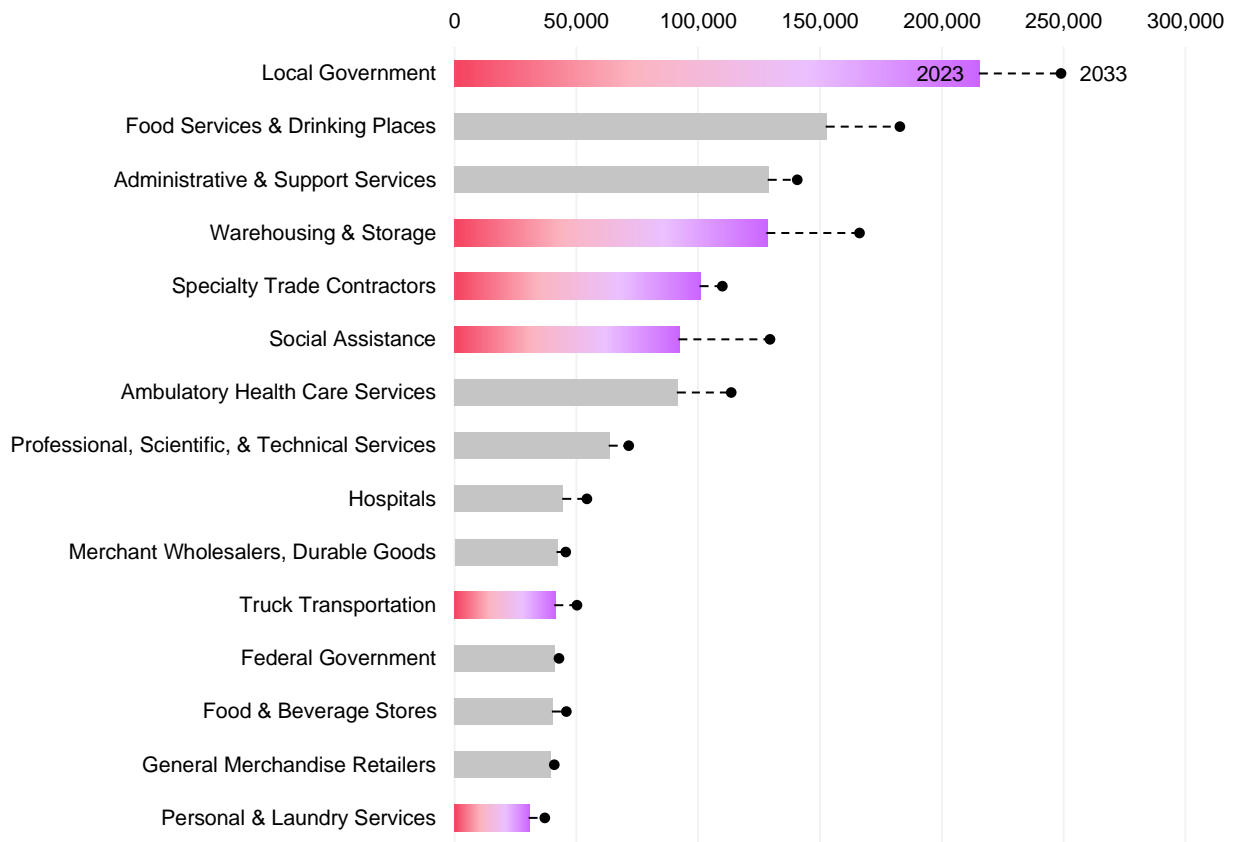
Figure 3: Historical and Projected Jobs in the Inland Empire, 2013 to 2033



Source: Employees & Self-Employed 2024.1.

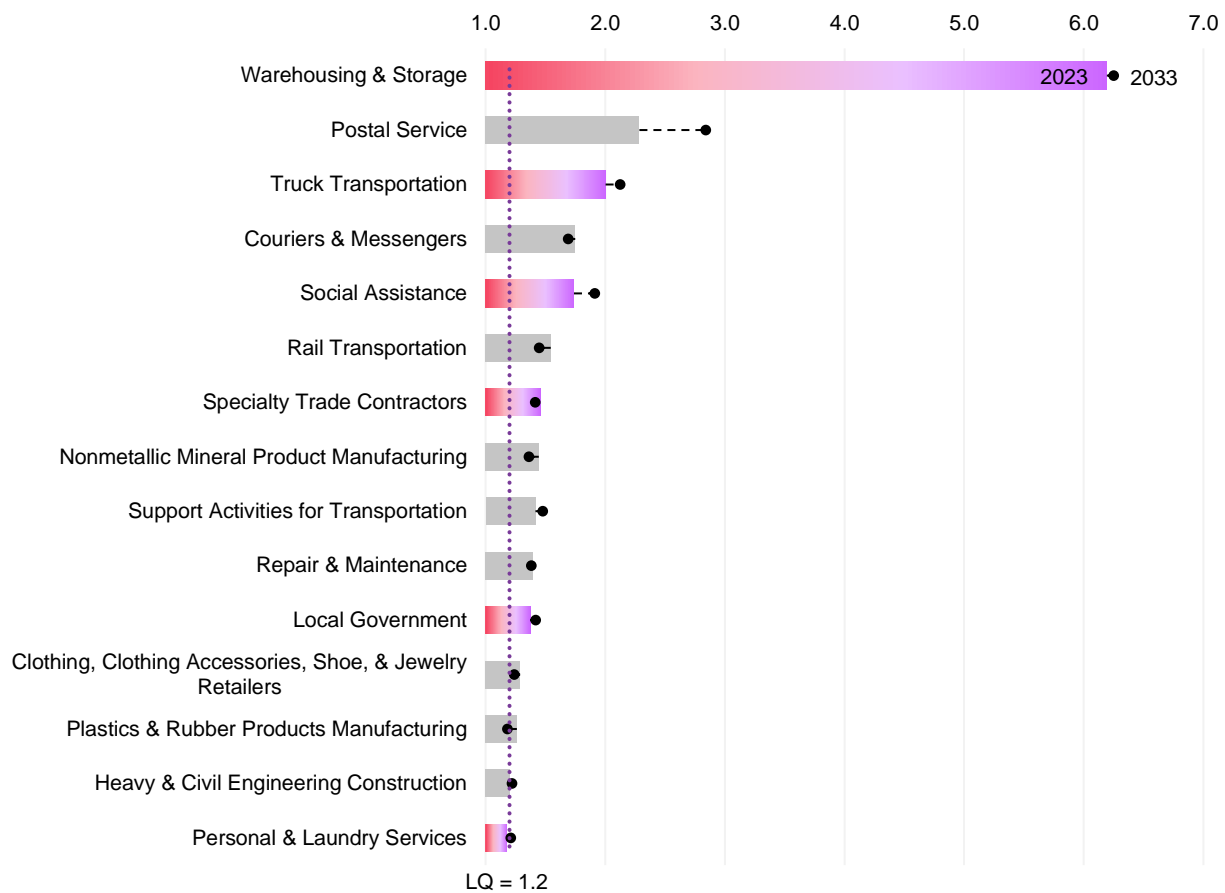
Figure 4 displays the top industry subsectors in terms of employment in the Inland Empire, and Figure 5 shows the top industry subsectors in terms of employment concentrations, referred to as location quotients (LQs). High LQs (usually anything greater than 1.2) are an indication that the region has a comparative advantage or specialization in certain industry subsectors relative to the rest of the nation or potentially to other regions.

Figure 4: Top Industry Subsectors in the Inland Empire by Jobs



Source: Employees & Self-Employed 2024.1.

Figure 5: Top Industry Subsectors in the Inland Empire by Employment Concentration (LQ)



Source: Employees & Self-Employed 2024.1.

Note the highlighted bars in the figures. Across all of the Inland Empire’s industry subsectors, six are within the top 15 in terms of jobs with relatively high LQs. The appearance of these industry subsectors provides an indication of their strength in the region’s economy and offers the district insight into potential employment opportunities for its students. These industry subsectors, ranked by 2023 jobs, are:

- Local Government;
- Warehousing & Storage;
- Specialty Trade Contractors;
- Social Assistance;
- Truck Transportation; and
- Personal & Laundry Services.

The data in Table 1 shows several of the region’s socioeconomic indicators. Household income, reported as a median annual value, includes the income of all individuals in a household, 15 years and over, whether they are related to the householder or not. Per capita income is calculated as the mean income for every person in the area divided by the aggregate income of the total population.

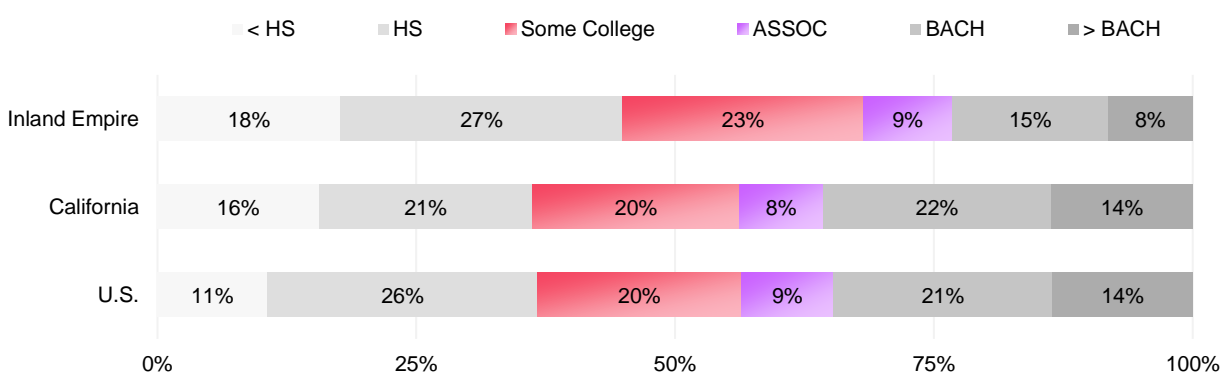
Table 1: Income, Unemployment, and Poverty Characteristics for the Inland Empire by County

COUNTY	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	PER CAPITA INCOME	POVERTY ALL PEOPLE
Riverside County	\$84,505	6.7%	\$35,356	11.4%
San Bernardino County	\$77,423	7.2%	\$31,348	13.8%

Source: American Community Survey 2022 five-year estimates from the U.S. Census Bureau Data.

Figure 6 displays the highest educational attainments of the Inland Empire, California, and U.S. adults, without reference to gender and the major race and ethnic groups. Educational attainment data are useful for targeting specific population groups with less than or greater than average education levels.

Figure 6: Highest Educational Attainments of Adults in the Inland Empire, California, and the U.S.



Numbers may not sum due to rounding.

Source: Lightcast demographics data and U.S. Census Bureau, American Community Survey.

PROGRAM DEMAND GAP ANALYSIS

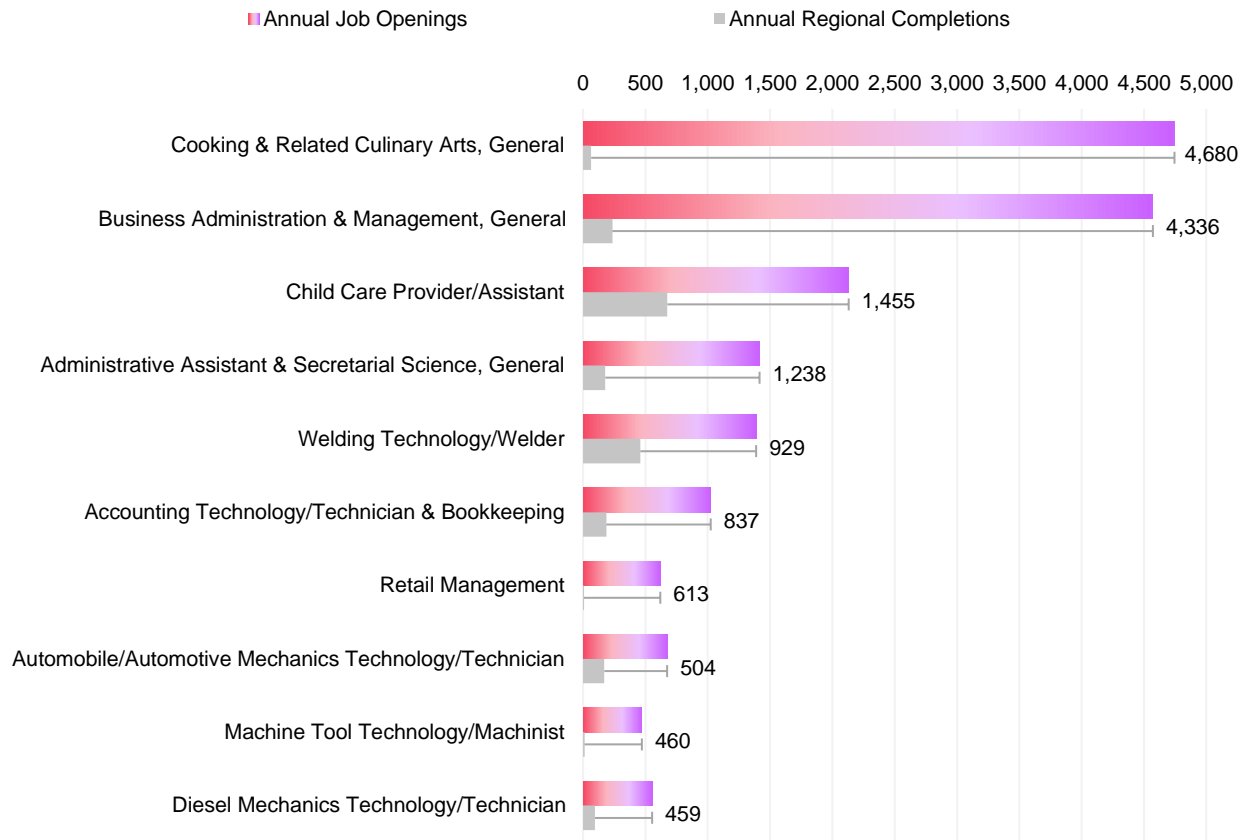
The program demand gap analysis provides results across all of SBCCD’s certificate, and degree level programs, which have been classified by their formal CIP code.¹ The analysis connects the district’s program completers with the availability of regional job openings. For SBCCD’s non-credit program, the analysis is similar in that it connects the district’s completers with the availability of regional job openings but without the additional reference to non-credit program completions from other postsecondary educational institutions in the Inland Empire. Furthermore, the analysis focuses on the gaps and surpluses in the programs by award level. A gap or surplus larger than 500 is considered beyond normal labor market fluctuations and therefore an area of consideration for program development.

¹ CIP refers to the Classification of Instructional Program and was originally developed by the U.S. Department of Education’s National Center for Education Statistics (NCES).

SBCCD offers numerous non-credit programs but due to data limitations only one Heavy/Medium Duty Truck Engine & Fuel Injection Technology was analyzed. Using a customized non-credit program-to-occupation map, the program is analyzed using similar methods to the program demand gap analysis. With regards to specific programmatic results, Heavy/Medium Duty Truck Engine & Fuel Injection Technology is currently well aligned with current marketplace demand, producing approximately as many completers as there are openings in the region. Additionally, the programs' completers command wages at or approaching the living wage for the region. It is important to note that occupations mapped to this program are expected to grow over the next decade. With this in mind the district should focus on maintaining program quality.

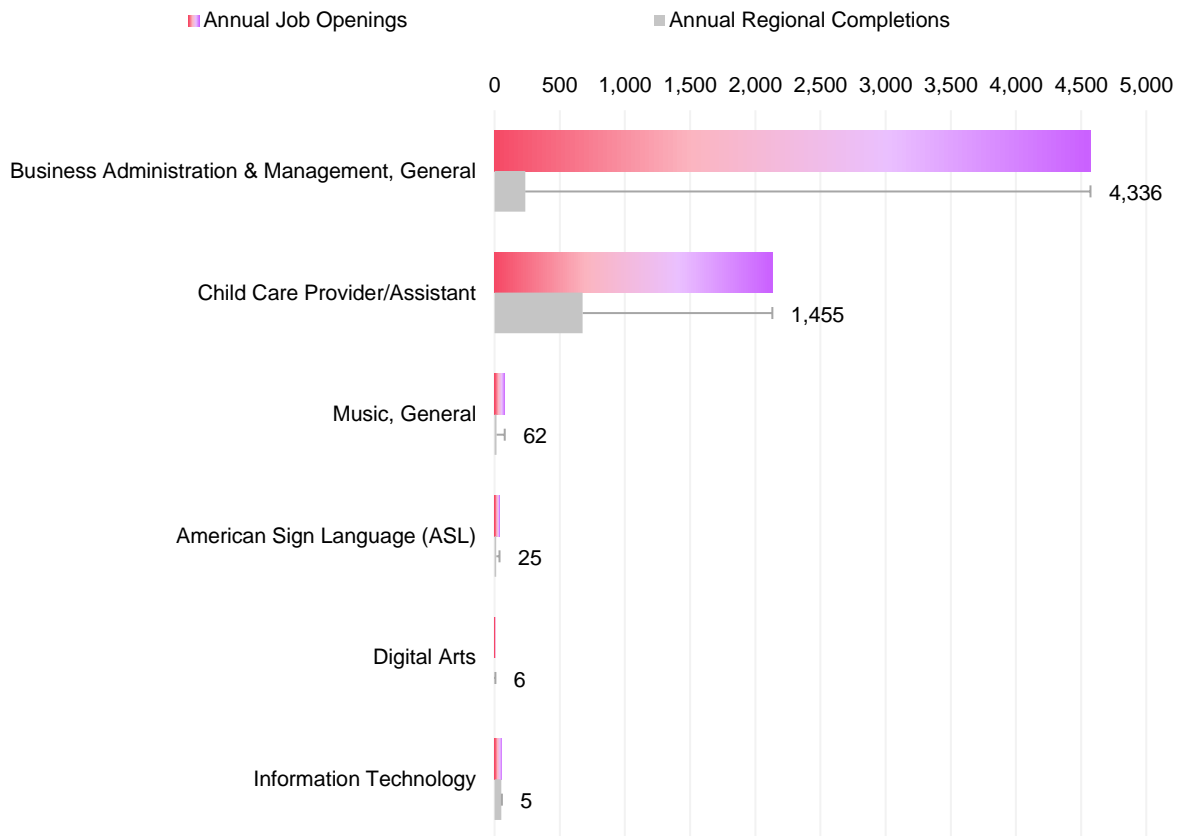
SBCCD offers 61 certificate level programs, eight of which have a significant gap above the 500-openings level of significance. With regards to specific programmatic results, the following certificate level programs should be considered for expansion due to their gap and median hourly wage: Business Administration & Management, General; Welding Technology/Welder; Automobile/Automotive Mechanics Technology/Technician; Diesel Mechanics Technology/Technician; Manufacturing Engineering Technology/Technician; and Electrical & Power Transmission Installation/Installer, General. The three largest certificate level programs offered by SBCCD in terms of average annual completions are Criminal Justice/Police Science, Emergency Medical Technology/Technician (EMT Paramedic), and Fire Science/Fire-fighting. Criminal Justice/Police Science has a gap that is not great enough to be considered significant, along with the high wage that completers command, it is recommended that the district focus on program quality. Fire Science/Fire-Fighting currently has a surplus of 113. This surplus is not great enough to be significant but should be considered when evaluating the programs health. The wages of Fire Science/Fire-Fighting is \$32.78 which is greater than the living wage for the region, this is in part due to a number of occupations with high wages, these occupations may require work experience, it is recommend that the district focus on prepare students to fill these high wage occupations. The EMT Paramedic program has a surplus of approximately 200 completers and a median hourly wage below the living wage in the region. This surplus and lower wage indicate there is low regional demand for the program. With this in mind, the district should work with industry partners to find employment opportunities for program graduates outside of the Inland Empire. It is worth noting, however, that some of these completers may be earning their EMT certification to qualify for a position in a career outside EMT-specific occupations.

Figure 7: SBVC's Top Certificate Level Gaps



Source: Lightcast program demand gap model.

Figure 8: CHC's Top Certificate Level Gaps

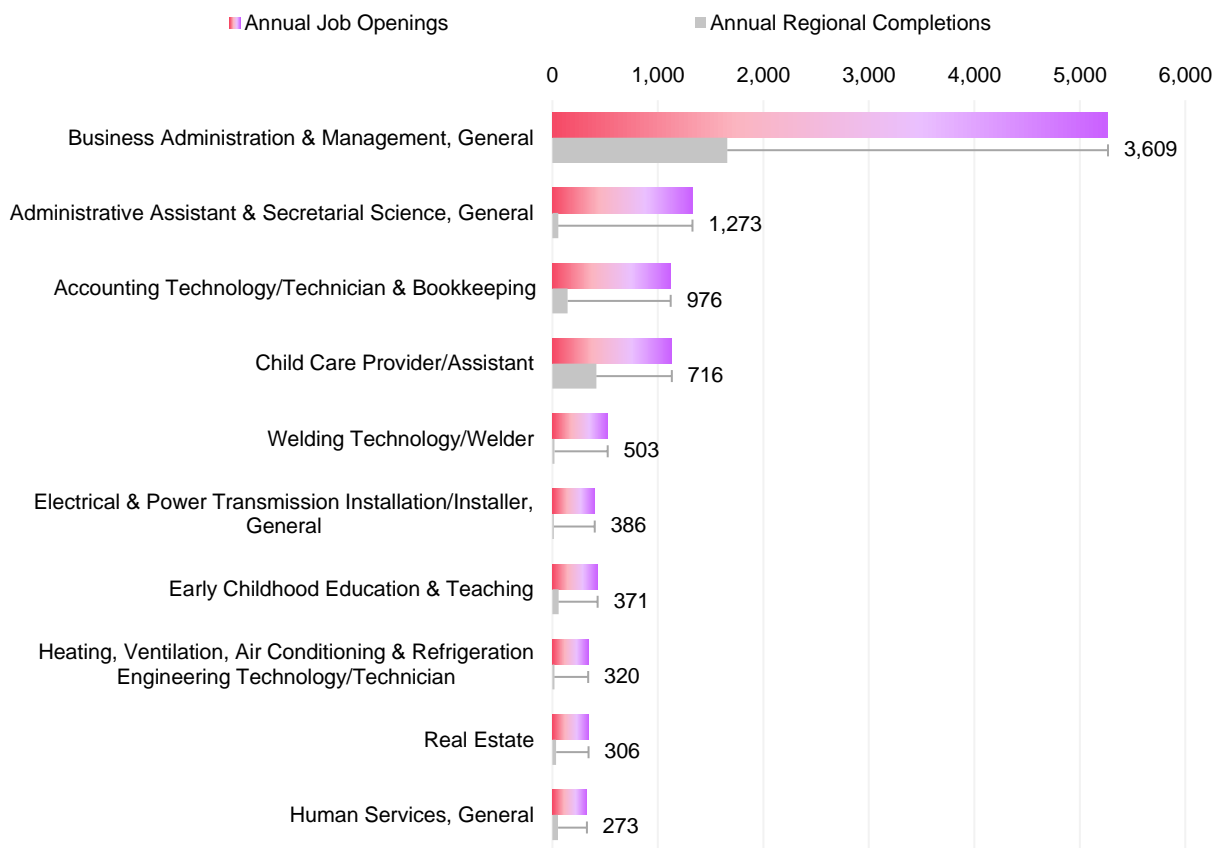


Source: Lightcast program demand gap model.

SBCCD offers 84 associate degree level programs, six of which have a significant gap above the 500-openings level of significance. Two programs at this award level have a significant surplus of completions. With regards to specific programmatic results, the following associate degree programs should be considered for expansion due to their gap and median hourly wage: Business Administration & Management, General; Welding Technology/Welder; and Electrical & Power Transmission Installation/Installer, General. The three largest associate degree programs offered by SBCCD in terms of average annual completions are Biological & Physical Sciences; Business Administration & Management, General; and Psychology, General. Biological & Physical Sciences as well as Psychology, General have a significant surplus. Psychology's surplus is just greater than the 500 needed to be considered significant. When examining this program, it should be considered that graduates are likely to find employment outside of their field. As well as their ability to work in occupations directly related to these their field, students in both programs will also gain skill in critical thinking research and communication which are marketable across a variety of occupations. Biological & Physical Sciences' surplus is greater than 1,500, three times that of the significance level. It is

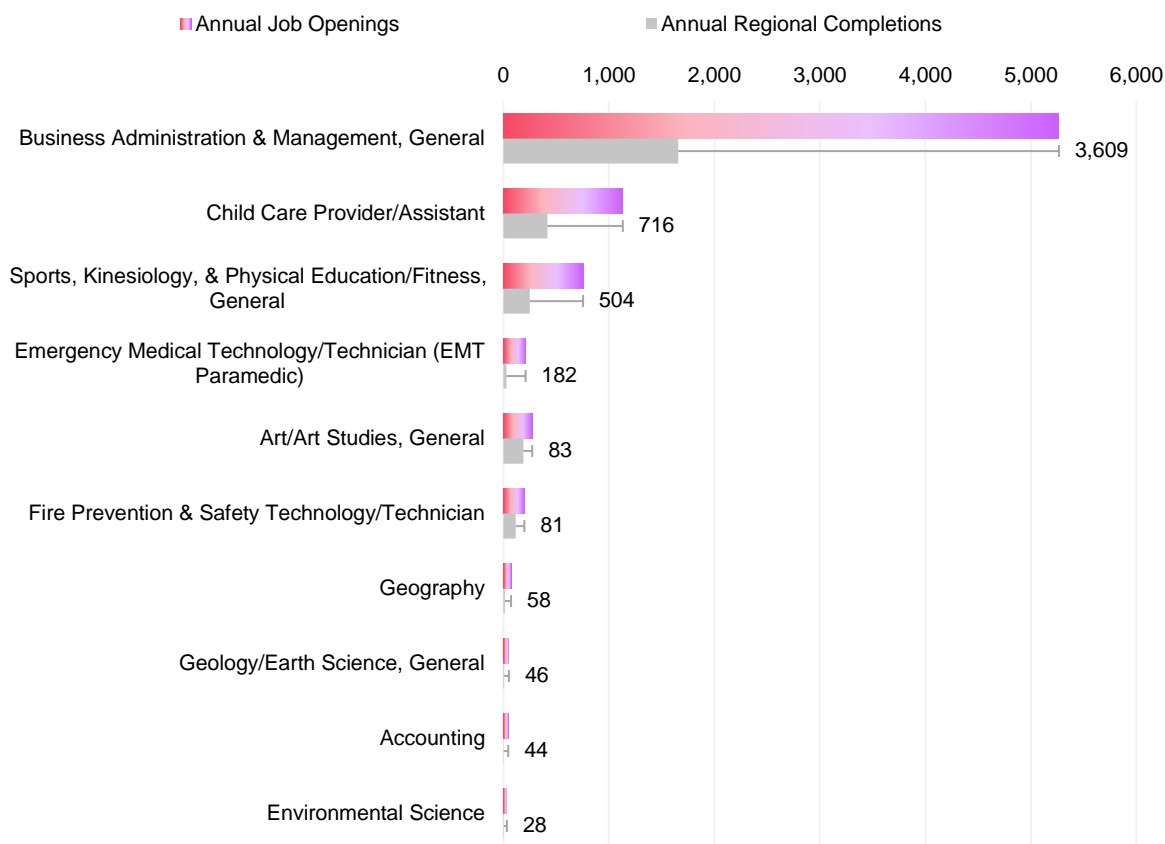
important to note that this surplus drops to 378 at the bachelor's degree level, and the median hourly wage also increases from \$23.36 to \$39.85. This is indicative of a bachelor's degree in this field the share of job openings for the higher wage occupations mapped to the program is greater at the bachelor's degree level. The district should focus on finding placement for these students in 4-year programs. In contrast, Business Administration & Management, General has a significant gap of 3,609. Along with its significant gap, completers of this program command a wage above that of the living wage for the region. It's important to consider that this high wage is in part due to the fact that the program is mapped to a number of management occupations which may not be available to completers without additional work experience.

Figure 9: SBVC's Top 10 Associate Degree Level Programs with a Gap



Source: Lightcast program demand gap model.

Figure 10: CHC's Top 10 Associate Degree Level Gaps

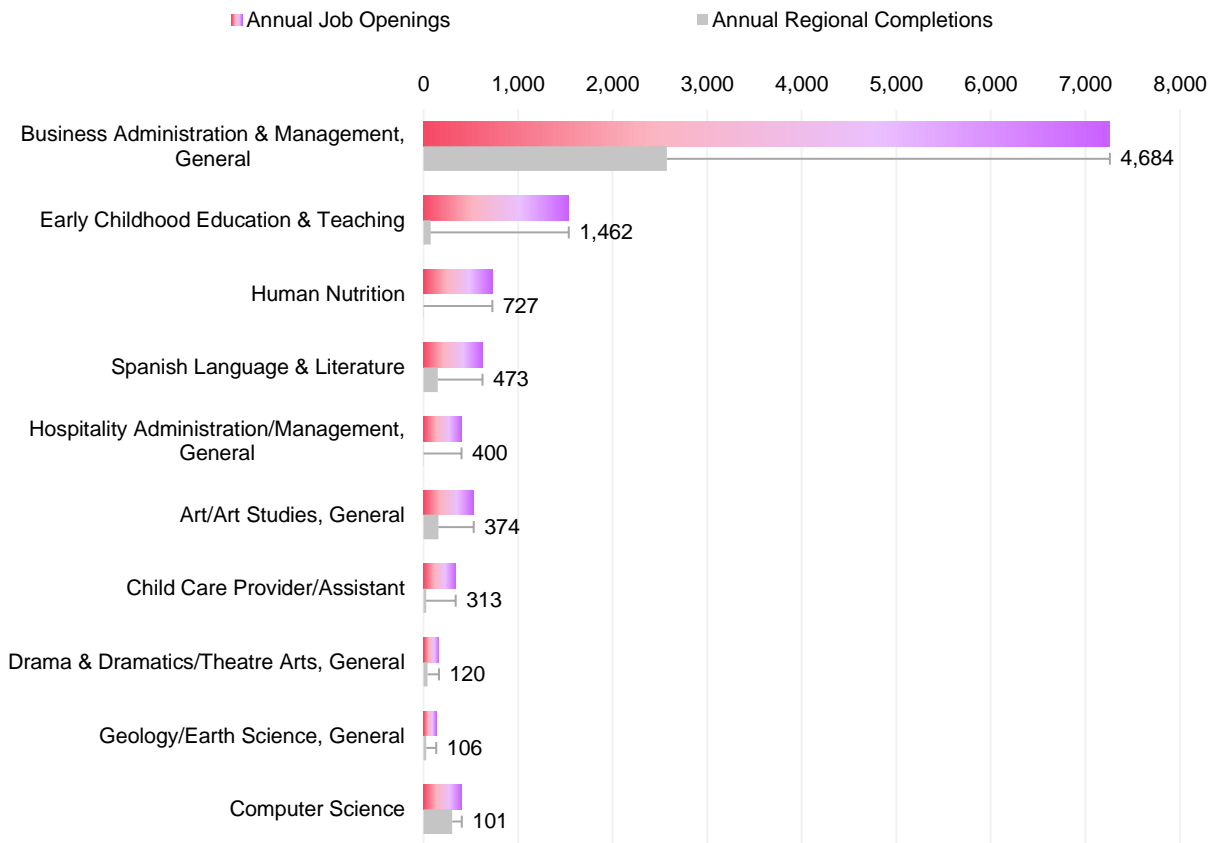


Source: Lightcast program demand gap model.

SBCCD offers 35 transfer-track degree programs. In other words, a program completer could readily transfer into a similar bachelor's degree level program at another postsecondary educational institution in the state. Of these programs, four have a significant gap above the 500-openings level of significance. One program at this level has a significant surplus of program completions. With regards to specific programmatic results, the following transfer-track degree programs should be considered for expansion due to their gap and median hourly wage: Business Administration & Management, General; Early Childhood Education & Teaching; and Spanish Language & Literature. The three largest transfer-track degree programs offered by SBCCD in terms of average annual completions are Business Administration & Management, General; Psychology, General; and Sociology, General. Business Administration & Management currently has the largest gap of any program at the transfer-track level with a gap of 4,684 job openings. This gap is indicative of a major opportunity and means that the program is a prime candidate for expansion. Along with its large gap the program commands a high median hourly wage of \$34.85, which is greater than the living wage in the region. Psychology, General currently has a small gap of 55 job openings. This is notable because at the associate degree level the program has a significant surplus. When combined with the higher wage that bachelor's degree completers command,

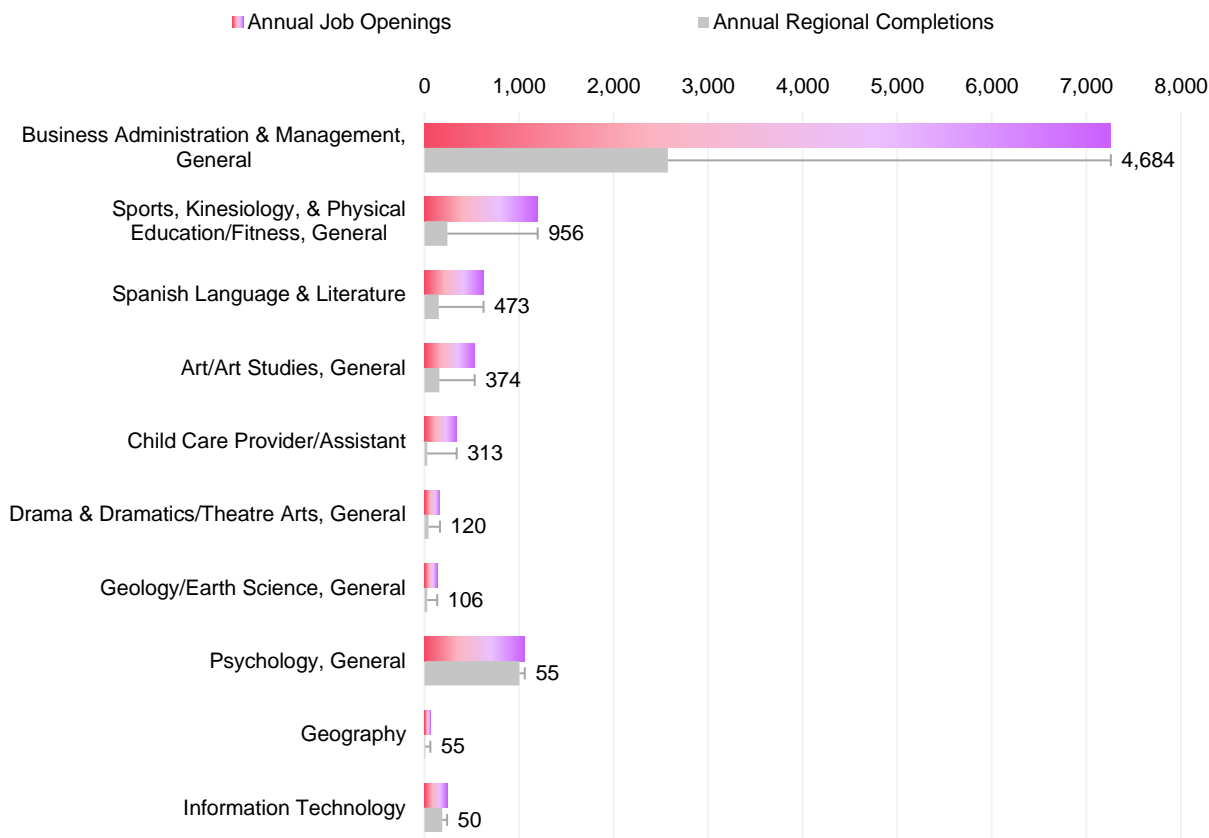
this indicates that the success of these students is highly correlated to their completion of a bachelor’s degree program, meaning the district should focus on matriculating these students into bachelor’s degree programs. Sociology, General has a significant surplus of 645, but commands a wage of \$35.93. It should be noted that in addition to filling occupations which are mapped to this program, completers receive a number of other marketable skills which prepare them to fill a number of occupations. With this in mind, the district should focus on maintaining program quality. Lastly, the success of transfer-track programs is also highly dependent on the ease with which students can transfer to a four-year institution. Therefore, it is important that SBCCD continues to work with the four-year institutions in the region to streamline this process.

Figure 11: SBVC's Top 10 Transfer-Track Degree Level Gaps



Source: Lightcast program demand gap model.

Figure 12: CHC's Top 10 Transfer-Track Degree Level Gaps



Source: Lightcast program demand gap model.

A liberal arts program expansion is not recommended at this time, but SBCCD administrators should be aware that students can find success in a variety of business-related occupations. Using Lightcast's Profile Analytics database, many liberal arts program completers are currently employed as retail salespersons, administrative assistants, and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in the Inland Empire. The district's liberal arts program, therefore, serves as a starting point to students' career goals beyond an associate degree level of education.



NEW PROGRAM OPPORTUNITIES

One hundred certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, many of which are related to production occupations. At the

associate degree level, there are fewer opportunities for new programs, considering the college’s current offerings. Nonetheless, SBCCD should consider new programs related to healthcare practitioners & technical occupations, whether its focus is on job openings in the Inland Empire or California. Another 31 transfer-track degree level programmatic areas of opportunity were identified in the program demand gap analysis, many of which are related to business & financial operations occupations. Some program opportunities may be related to the college’s current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the region’s current and projected labor market demand.

Table 2: Program Opportunities by Education Level

SOC TITLE	2023 JOBS	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE	ED. LEVEL
Security Guards	20,063	2,124	17	2,106	\$16.38	CERT
Carpenters	21,410	1,193	6	1,187	\$28.20*	CERT
Shipping, Receiving, & Inventory Clerks	15,150	1,184	3	1,181	\$18.10	CERT
Nursing Assistants	9,370	1,263	191	1,072	\$18.09	CERT
Hairdressers, Hairstylists, & Cosmetologists	8,879	1,081	257	824	\$16.40	CERT
First-Line Supervisors of Transportation & Material Moving Workers, Except Aircraft Cargo Handling Supervisors	8,939	808	0	808	\$29.63*	CERT
Animal Caretakers	3,746	489	0	489	\$16.01	CERT
Inspectors, Testers, Sorters, Samplers, & Weighers	5,569	437	6	430	\$20.32	CERT
Packaging & Filling Machine Operators & Tenders	4,564	354	0	354	\$17.82	CERT
Operating Engineers & Other Construction Equipment Operators	4,590	346	2	345	\$36.92*	CERT
Physical Therapist Assistants	915	116	32	84	\$36.98*	ASSOC
Paralegals & Legal Assistants	1,484	77	14	63	\$29.08*	ASSOC
Occupational Therapy Assistants	244	105	60	45	\$45.55*	ASSOC
Training & Development Specialists	3,563	175	1	175	\$27.18*	T-T
Civil Engineers	3,181	160	12	149	\$51.53*	T-T
Securities, Commodities, & Financial Services Sales Agents	3,000	141	1	140	\$24.79	T-T
Logisticians	2,134	121	0	121	\$34.54*	T-T
Educational Instruction & Library Workers, All Other	2,909	92	0	92	\$24.25	T-T

SOC refers to the Standard Occupational Classification system used to classify occupations. Average annual job openings represent regional data from 2023 to 2033. Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.



Introduction

An efficient labor market requires a seamless flow of skilled workers, the postsecondary educational institutions that educate and train them, and the employers that hire them. One factor behind workforce misalignment stems from when the needs of the employers evolve differently than the programs that train their workers. These misalignments may happen at different times and for different reasons:

- Employer training becomes more tailored and comprehensive;
- Businesses come and go, and certain educational programs become more or less pertinent to a specific region;
- Rapid advances in technology and business create curriculum needs that few educational institutions possess; and
- As economic conditions shift, businesses have different hiring requirements for their employees.

In light of these dynamics, an up-to-date understanding of the economy and the demand for skilled labor is vital to the planning efforts of colleges and universities seeking to adapt their program offerings to the requirements of an ever-changing workforce.

To gain better insight into economic conditions and workforce trends, San Bernardino Community College District (SBCCD) partnered with Lightcast, a labor market analytics firm, serving higher education, economic and workforce development, talent acquisition, and site selection. In this report, Lightcast conducts an environmental scan of the region's economy, provides a program demand gap analysis of SBCCD program offerings, and makes recommendations for new program development.

The program demand gap analysis is performed by assessing the supply and demand of skilled workers and identifying the educational programs that need to be adapted in order to fill any existing or future gaps. The analysis weighs the educational output of SBCCD and other postsecondary educational institutions in the region against the number of job openings related to the district's program offerings to determine whether a deficit or an oversupply of skilled workers exists. The goal of the analysis is to provide SBCCD with relevant data and information that it can use when solving problems and making decisions about current and future program development.

IMPORTANT NOTE

This analysis is intended to serve as a starting point for SBCCD as the district discusses regional workforce needs. A deficit (gap) or oversupply (surplus) of workers in a particular occupation category represents a potential problem for the region, making it important for each program and occupation group to be evaluated by the district on a case-by-case basis. The purpose of this analysis is, therefore, to initiate the conversation on evaluating program effectiveness. Once evaluated internally within the district, specific implications may be considered for programs with substantial gaps or surpluses.

It must be noted that our analysis does have its limitations in that only the education supply pipeline is considered. This is due to data availability at the region and institutional levels. However, other sources—unemployed workers, industry trained pipelines, workers migrating to the region, and job changers from other occupational categories—can also be a source of skilled workers. These types of considerations are useful when evaluating specific types of occupations. Publicly available data sources are limited in accounting for this, and consequently these labor sources are unavailable for Lightcast analysis. Primary data collection methods (i.e., interviews and surveys) are among the only ways to obtain information on the other sources for skilled workers.



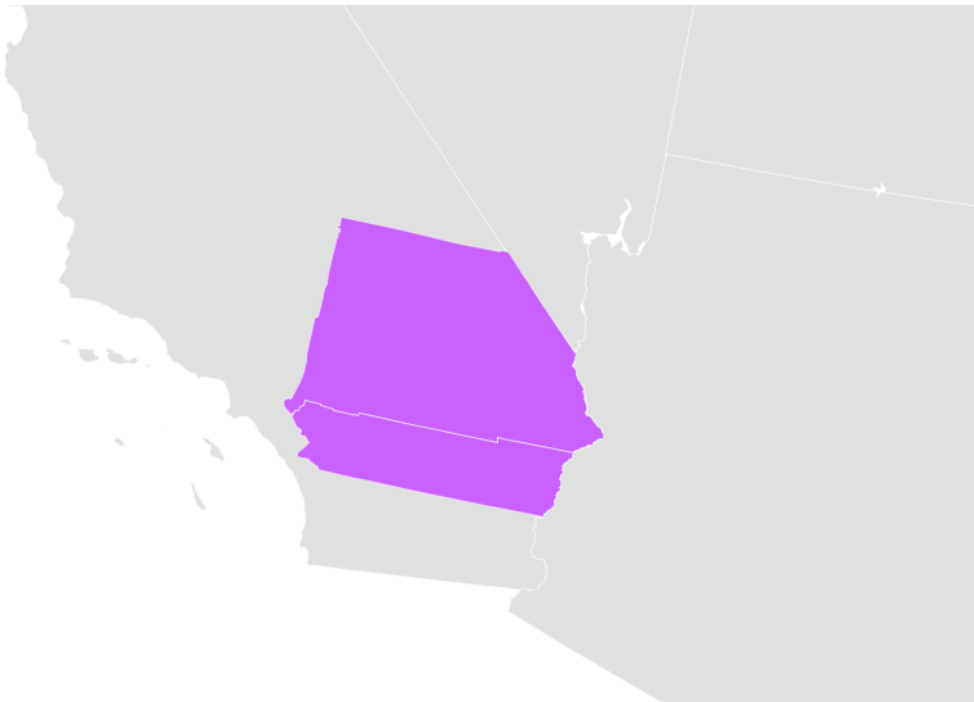
CHAPTER 2:

Environmental Scan

Before looking at the results of the program demand gap analysis, SBCCD should first consider the economic structure of its region, referred to in this report as the Inland Empire and defined as San Bernardino and Riverside Counties in California (Figure 2.1). Identifying the driving industries within the region is an important first step for four reasons:

- it helps SBCCD understand where the district should logically target its efforts;
- it helps to reveal whether there are industries that may be overlooked as a result of recent economic growth;
- it helps identify the top occupations within those key driving industries; and
- It gives the district a deeper understanding of the region's population characteristics and the socioeconomic background of current and future SBCCD students.

Figure 2.1: Map of the Inland Empire



Region definition provided by San Bernardino Community College District.

To these ends, this chapter provides an environmental scan of the Inland Empire total jobs and jobs within its industries, unemployed workers, commuting patterns, population demographics and socioeconomic indicators, and the highest educational attainments of its adult residents. Tables and figures, in some cases, also present data in California and the U.S. Supporting data tables are found in Appendix 3.

TOTAL POPULATION

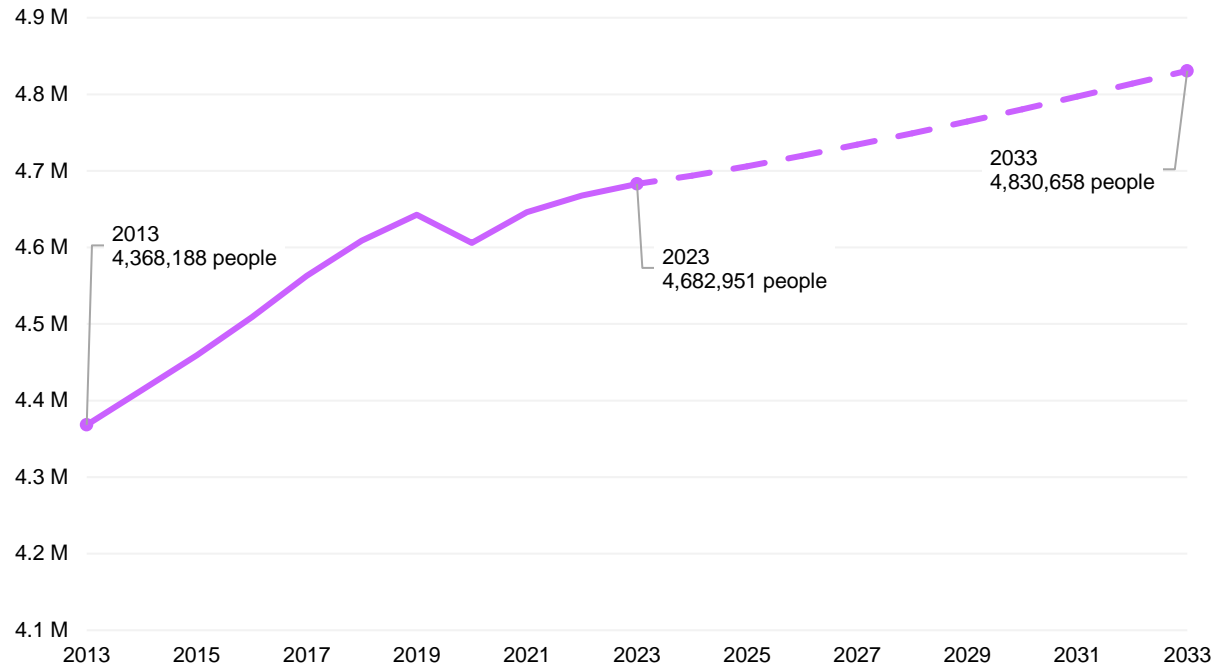
Population projections can be used to anticipate the future demands of a regional labor market as well as the future supply of students to higher education. For the district, strong population growth may indicate it needs to expand its capacity; conversely, low population growth or population decline can help the district plan for a more challenging enrollment environment.

In this section, population data for the region, state, and the U.S. are shown. Historic population data reflect population estimates from the U.S. Census Bureau. Population projections data are generated using a cohort model incorporating birth and mortality rates from the U.S. Centers for Disease Control and estimated in-migration and out-migration rates from U.S. Census Bureau population estimates.

Historical and projected changes in the regional population are presented in the following figures. In 2013, 4.4 million people lived in the Inland Empire, and 4.8 million people are projected to live in the region by 2033 (Figure 2.2). Using 2013 as the base year, this reflects a growth rate of 10.6% (Figure 2.3). California's population is projected to decrease by 1.3% over the same 20-year period, and the population in the U.S. is projected to increase by 12.1%.

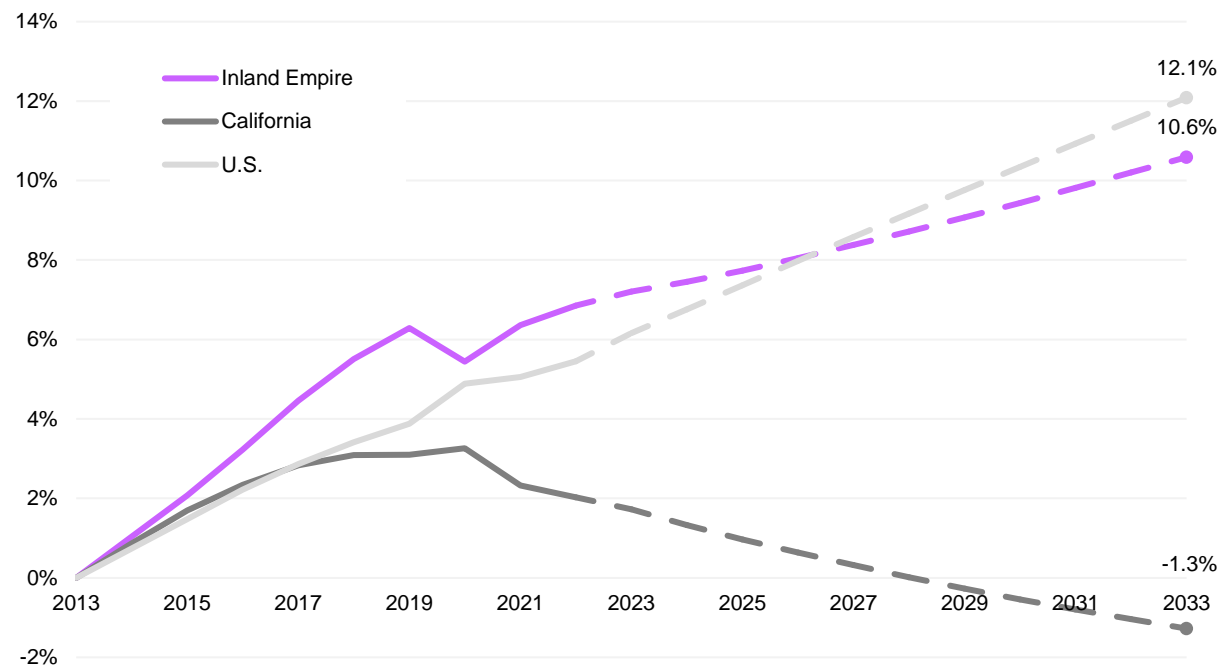
Figure 2.4 shows the year-over-year changes in population, by percent, for the Inland Empire, California, and the U.S. The population in the three regions is projected to change by 0.2%, -0.4%, and 0.6% from 2023 to 2024, respectively.

Figure 2.2: Historical and Projected Population in the Inland Empire, 2013 to 2033



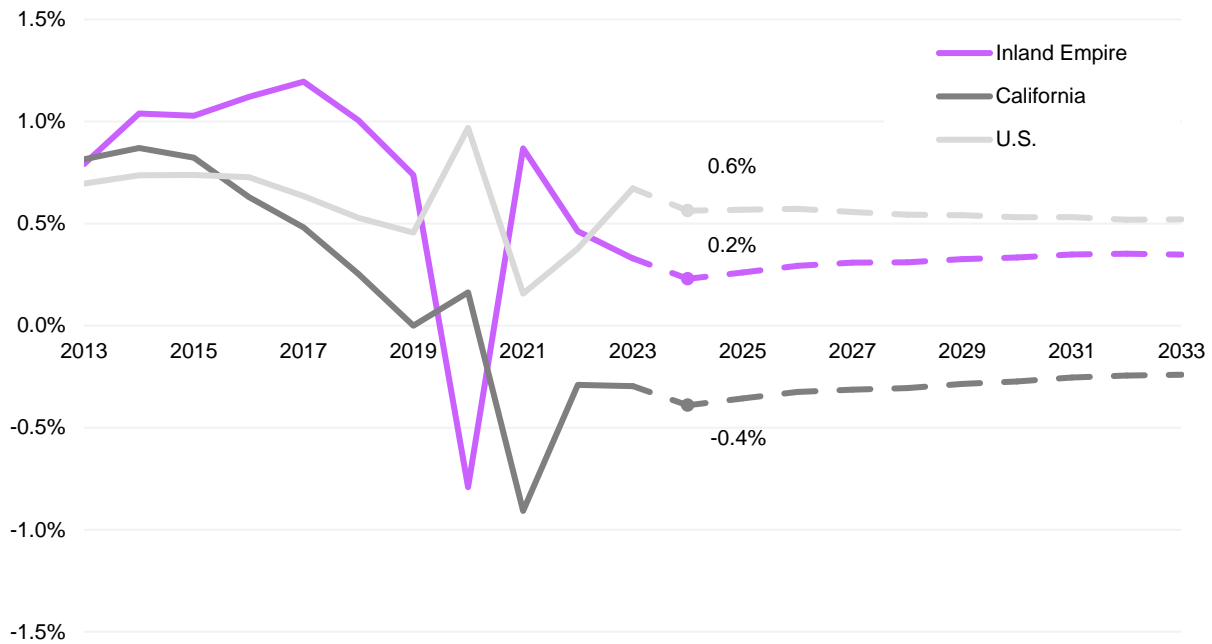
Source: Lightcast demographics data, U.S. Census Bureau, U.S. Health Department.

Figure 2.3: Percent Population Change from 2013 to 2033 in the Inland Empire, California, and the U.S.



Source: Lightcast demographics data, U.S. Census Bureau, U.S. Health Department.

Figure 2.4: Annual Percent Population Change in the Inland Empire, California, and the U.S., 2013 to 2033



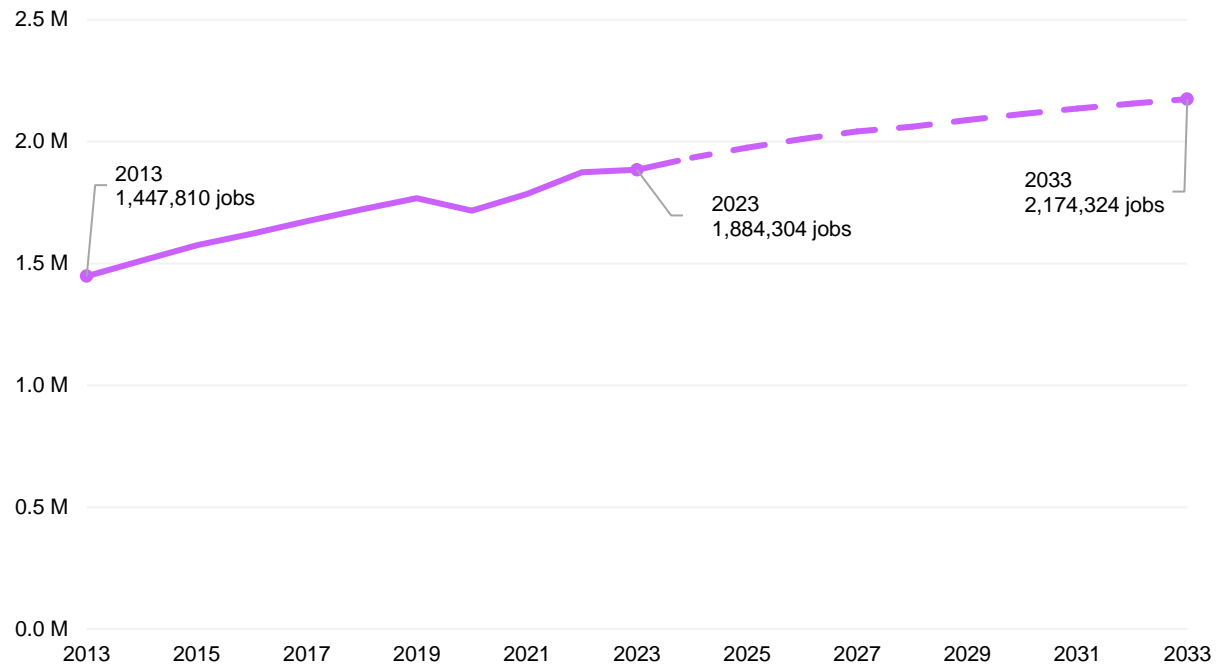
Source: Lightcast demographics data, U.S. Census Bureau, U.S. Health Department.

TOTAL JOBS

Job counts and the changes in jobs over time provide insight into the Inland Empire as an attractive region for job seekers, employers, and economic developers. Figure 2.5 shows regional jobs from 2013 to 2033. In addition, Figure 2.6, and Figure 2.7 present data on jobs in the Inland Empire for the same time period but highlight the region’s percent job change, using 2013 as a base year and showing year-over-year job change, respectively.

As shown in Figure 2.5, the Inland Empire supported 1.4 million jobs in 2013. By 2023, that number increased to 1.9 million jobs for an increase of 30.1%. For context, in 2023 California supported 20 million jobs, and the U.S. supported 171 million jobs. In addition, the region is projected to add another 290,020 jobs from 2023 to 2033 for a growth of 15.4%.

Figure 2.5: Historical and Projected Jobs in the Inland Empire, 2013 to 2033

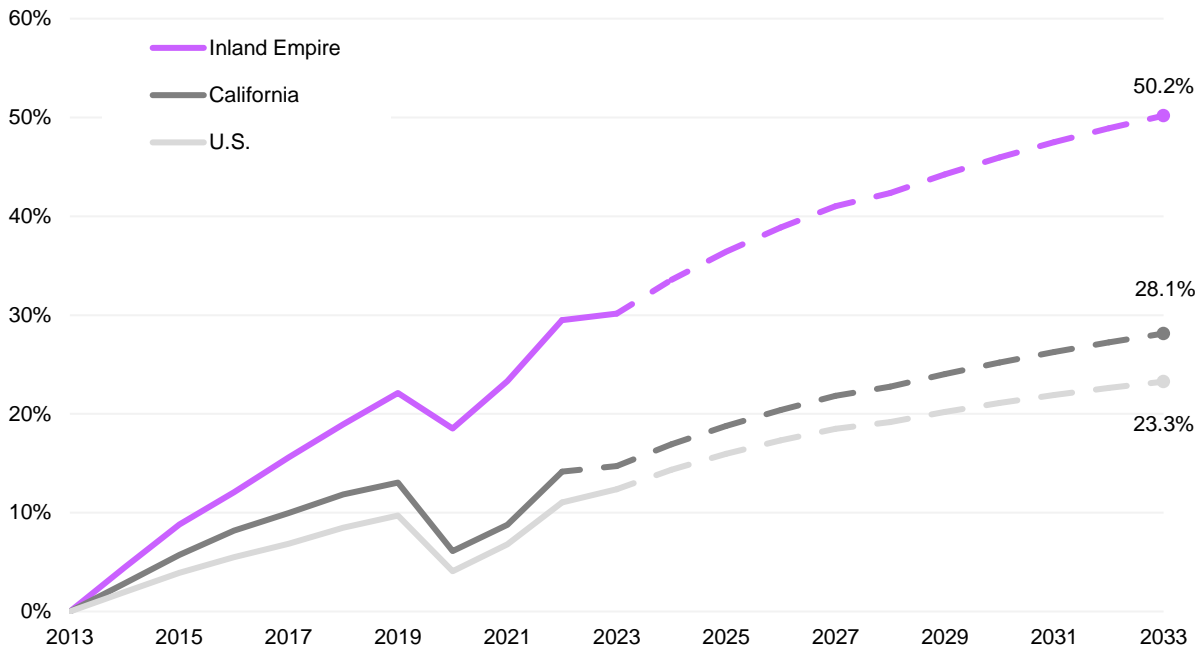


Source: Employees & Self-Employed 2024.1.

Figure 2.6 displays the historical and projected job change, by percent, for the region, state, and the U.S. between 2013 and 2033, with 2013 serving as the base year. Using Lightcast’s job projections, job growth from 2013 to 2033 in the Inland Empire, California, and the U.S. are expected to be 50.2%, 28.1%, and 23.3%, respectively.

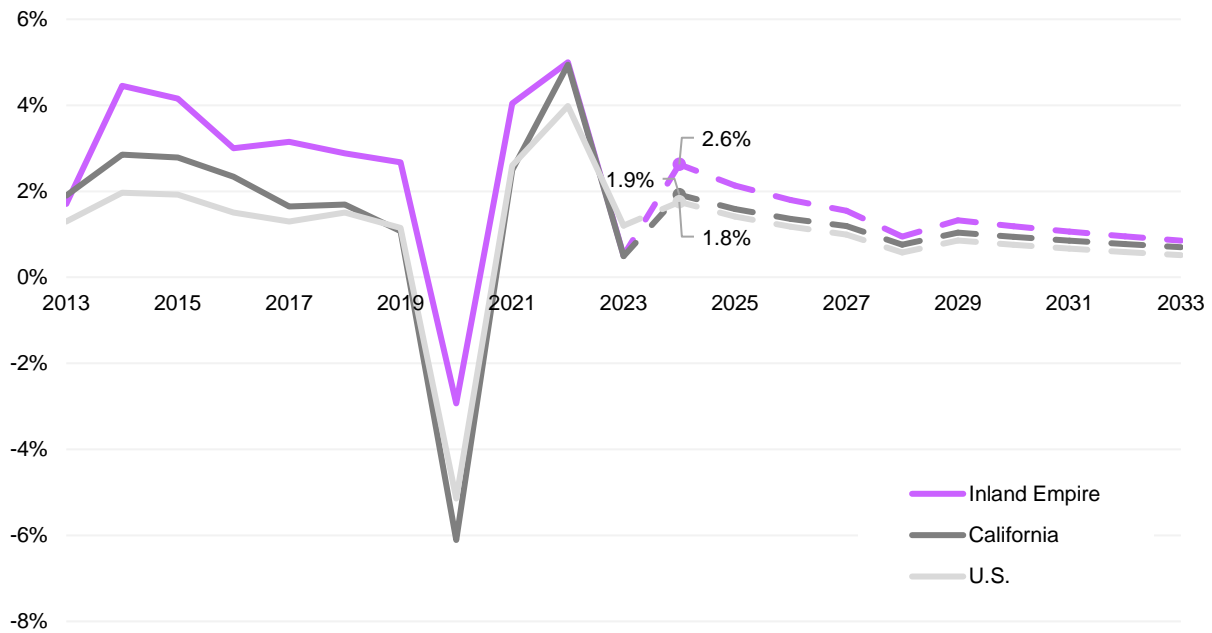
Figure 2.7 shows the year-over-year changes in jobs, by percent, for the Inland Empire, California, and the U.S. The three regions are projected to grow by 2.6%, 1.9%, and 1.8% from 2023 to 2024, respectively. The impact of the Covid-19 pandemic is clearly illustrated in these figures by the loss of jobs from 2019 to 2020. However, jobs in the Inland Empire recovered well from 2020 to 2021 and are projected to continue growing over the next ten years at a similar pace to the rate of growth before the pandemic.

Figure 2.6: Percent Job Change from 2013 to 2033 in the Inland Empire, California, and the U.S.



Source: Employees & Self-Employed 2024.1.

Figure 2.7: Annual Percent Job Change in the Inland Empire, California, and the U.S. from 2013 to 2033.



Source: Employees & Self-Employed 2024.1.

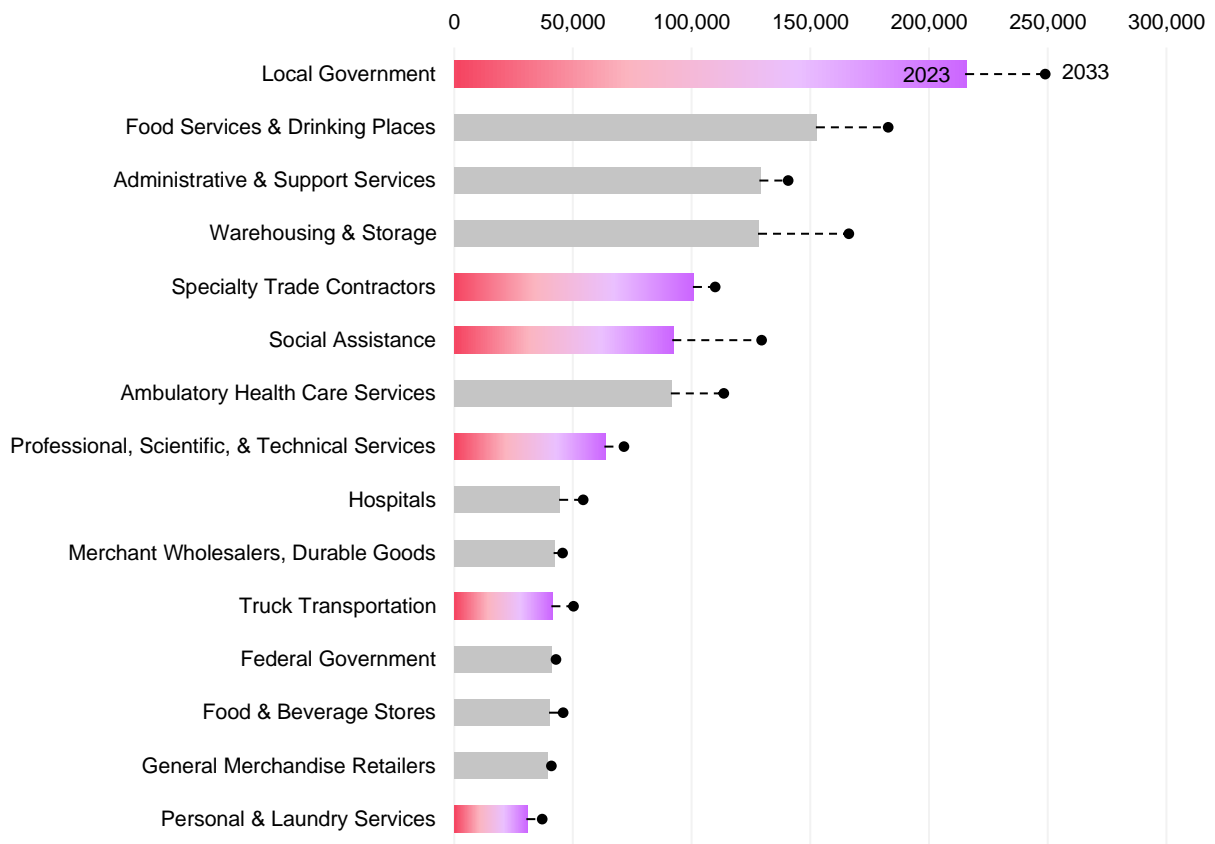
INDUSTRY COMPOSITION

Evaluating current and future employment by industry provides information on the region's economic diversity. Understanding the industry mix is important for drawing connections to the occupations and companies that are in-demand, and students are likely to find employment in the largest regional industries. The North American Industry Classification System (NAICS) is the structure used by federal agencies to classify business establishments based on their production process (although the final product or service is usually similar for the firms in a given industry). NAICS applies a six-digit hierarchical coding system to organize nearly 1,000 detailed industries in the U.S. For the analysis in this section, Lightcast has aggregated industries into their three-digit NAICS codes, referred to as industry subsectors.²

Figure 2.8 presents the 15 largest industry subsectors in the Inland Empire, by their 2023 job counts and also shows the industry subsectors' projected change over the next decade. The region supported 1.9 million jobs in 2023, and by 2033, it is projected to add 290,020 new jobs for a 15.4% job increase. As shown in the figure, Local Government is the largest employer, with 215,620 jobs in 2023, and it is expected to remain the top regional employer. The Food Services & Drinking Places and Administrative & Support Services industry subsectors are the next largest, with 152,750 and 128,950 jobs in 2023, respectively. As for growth, Warehousing & Storage is projected to add the most jobs of the top 15 industry subsectors, with a 10-year increase of 37,840 new jobs for a 29.5% job growth. In fact, none of the top 15 industry subsectors are expected to contract between 2023 and 2033.

²In Lightcast data, all establishments in the main NAICS hierarchy are private sector only. Jobs in Educational Services and Ambulatory Health Care Services, for example, are not associated with local, state, or federal government jobs. Jobs for public school teachers and city firefighters are in Local Government, whereas college professors and forest firefighters are commonly employed by State Government. Mail carriers and transportation security screeners are examples of jobs in Federal Government.

Figure 2.8: Jobs by Industry Subsector in the Inland Empire, 2023 and 2033



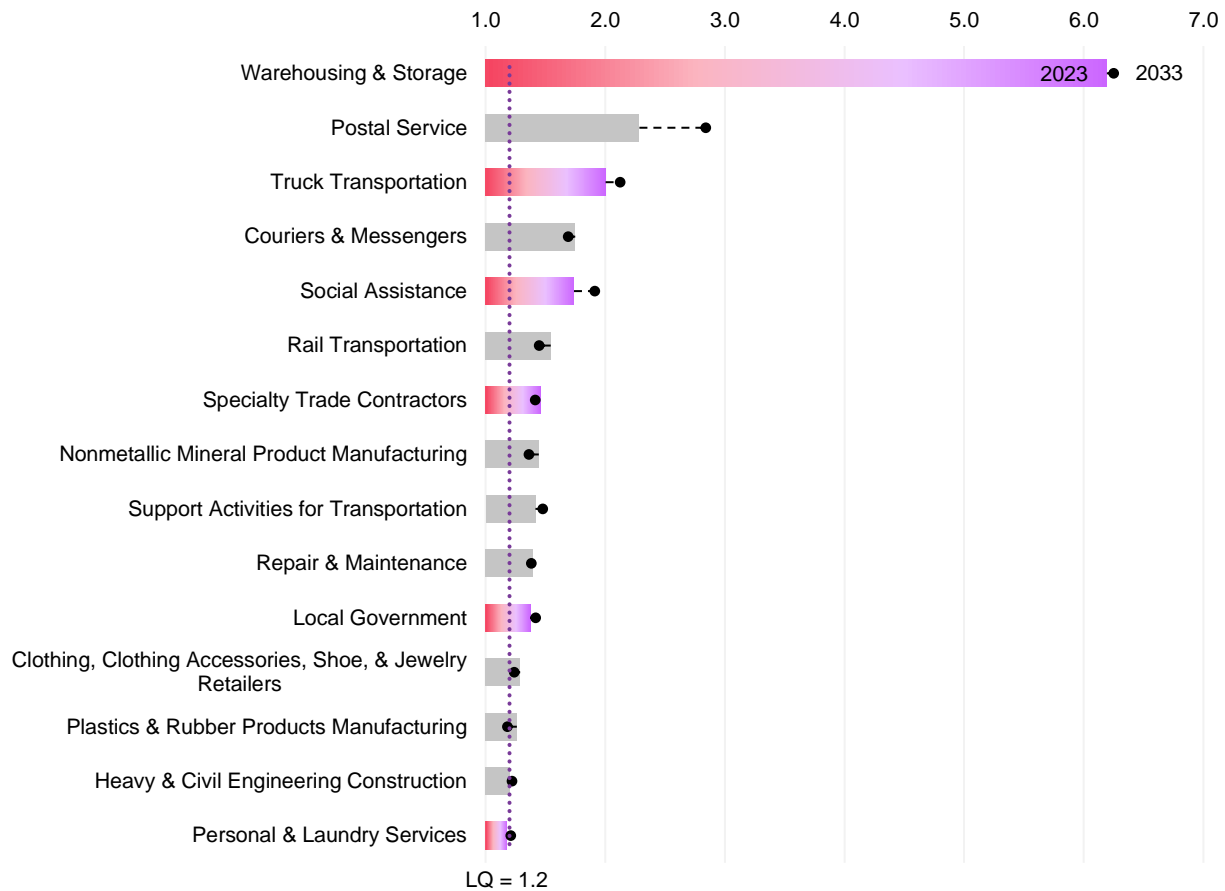
Highlighted bars are key industry subsectors. See 'Occupations Within Key Industry Subsectors' for more information.
 Source: Employees & Self-Employed 2024.1.

The employment concentration of the Inland Empire’s industry subsectors is measured by a location quotient (LQ). LQs are used to assess competitiveness by comparing the concentration of employment in an industry in the region against the employment concentration for that same industry in the U.S. An LQ equal to 1.0 means that the percentage of total employment comprised by an industry in the Inland Empire matches the percentage of total employment of that industry in the U.S. An LQ greater than 1.0 means that the industry has a greater employment share relative to that of the U.S. High LQs, which are typically greater than 1.2, are an indication that the region has a comparative advantage or specialization in an industry.

The industry subsectors with the 15 highest LQs in the Inland Empire are shown in Figure 2.9. The Warehousing & Storage industry subsector had the highest LQ in 2023 at 6.2. The industry subsector is expected to increase in employment concentration between 2023 and 2033 and remain the top industry subsector with the largest LQ. The Postal Service; Truck Transportation; and Couriers & Messengers industry subsectors also have relatively large employment concentrations, with LQs of 2.3, 2, and 1.7 in 2023, respectively. As for 10-year growth, Postal Service is projected to increase in LQ by 24.3% from an LQ of 2.3 to an LQ of 2.8, which is the largest percent increase among the top 15 industry subsectors in the figure.

On the other hand, seven industry subsectors are expected to drop in LQ between 2023 and 2033. Plastics & Rubber Products Manufacturing has the largest percent decrease (6.3%). Despite the declines, most of the region’s top 15 industry subsectors will remain above the 1.2 high-LQ threshold.

Figure 2.9: Employment Concentration (LQ) by Industry Subsector in the Inland Empire, 2023 and 2033



Highlighted bars are key industry subsectors. See ‘Occupations Within Key Industry Subsectors’ for more information.
 Source: Employees & Self-Employed 2024.1.

Industry earnings are defined as total wages, salaries, supplements (such as additional employee benefits), and proprietor income. Workers in various industry subsectors see different average wages, so identifying the Inland Empire’s top industries by earnings is another method of evaluating an industry’s strength. Table 2.1 shows the region’s top 15 industry subsectors in descending order of 2023 earnings, as well as additional jobs data.

Local Government had the highest earnings in the Inland Empire (\$21.7 billion), which accounted for 15% of the region’s total earnings (\$143.5 billion). The next largest industry subsector was Ambulatory Health Care Services, bringing in 5.8% of the region’s total

earnings. Specialty Trade Contractors had the third largest earnings with 5.6% of the region's total earnings. As illustrated in Figure 2.10, the largest five industry subsectors accounted for 37.6% of all earnings in the county.

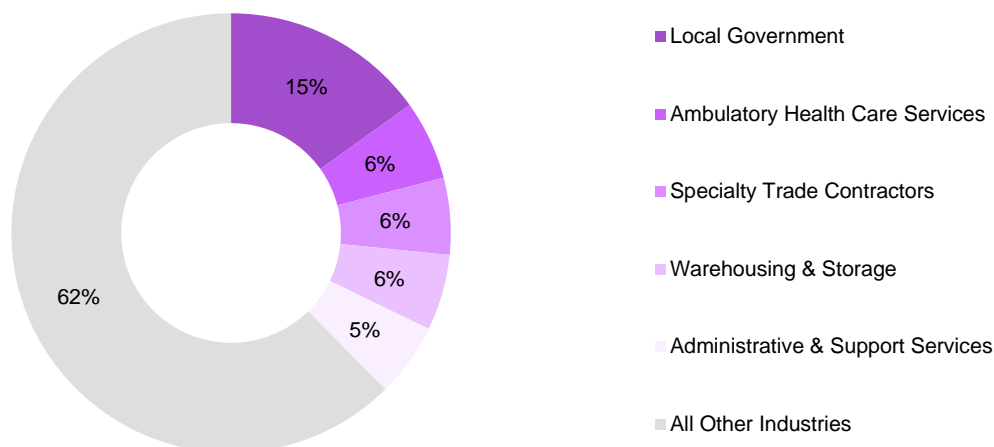
Table 2.1: Industry Subsector Earnings in the Inland Empire

NAICS TITLE	2023 EARNINGS (\$ MILLIONS)	% 2023 EARNINGS	2023 JOBS	2033 JOBS	JOB CHANGE	% JOB CHANGE
Local Government	\$21,679	15.1%	215,616	248,947	33,331	15.5%
Ambulatory Health Care Services	\$8,387	5.8%	91,648	113,548	21,900	23.9%
Specialty Trade Contractors	\$8,107	5.6%	100,959	109,908	8,949	8.9%
Warehousing & Storage	\$8,033	5.6%	128,377	166,217	37,840	29.5%
Administrative & Support Services	\$7,766	5.4%	128,947	140,659	11,712	9.1%
Professional, Scientific, & Technical Services	\$6,655	4.6%	63,671	71,482	7,810	12.3%
Real Estate	\$5,547	3.9%	23,783	26,930	3,147	13.2%
Food Services & Drinking Places	\$4,651	3.2%	152,751	182,789	30,038	19.7%
Truck Transportation	\$4,556	3.2%	41,337	50,236	8,899	21.5%
Hospitals	\$4,446	3.1%	44,600	54,310	9,709	21.8%
Merchant Wholesalers, Durable Goods	\$4,172	2.9%	42,266	45,632	3,365	8.0%
Federal Government	\$3,764	2.6%	41,156	42,846	1,691	4.1%
State Government	\$2,776	1.9%	28,611	32,614	4,002	14.0%
Social Assistance	\$2,664	1.9%	92,262	129,466	37,204	40.3%
Motor Vehicle & Parts Dealers	\$2,547	1.8%	26,998	30,191	3,193	11.8%
All other industries	\$47,766	33.3%	661,322	728,550	67,228	10.2%
Total	\$143,517	100.0%	1,884,304	2,174,324	290,020	15.4%

Numbers may not sum due to rounding.

Source: Employees & Self-Employed 2024.1.

Figure 2.10: Top Five Industry Subsectors by Earnings in the Inland Empire



Numbers may not sum due to rounding.
 Source: Employees & Self-Employed 2024.1.

OCCUPATIONS WITHIN KEY INDUSTRY SUBSECTORS

Six industry subsectors are found in both Figure 2.8 and Figure 2.9 because they are large employers and have high LQs. Altogether, the industry subsectors represent 32% of the Inland Empire’s jobs. These industry subsectors, in descending order of 2023 jobs, are:

- Local Government;
- Warehousing & Storage;
- Specialty Trade Contractors;
- Social Assistance;
- Truck Transportation; and
- Personal & Laundry Services.

Their appearance in the figures provides an indication of their relative strength in the Inland Empire, and thus, we identified the most common occupations within the six industry subsectors, called a staffing pattern.³ The industry subsectors’ staffing patterns provide insight into not only the region’s labor market demand, but by extension, the demand for the district’s program offerings.

The **Local Government** industry subsector in the region supported 215,620 jobs in 2023 and had an LQ of 1.4. It is comprised of five industries at the six-digit NAICS code level. The largest industry is the Elementary & Secondary Schools (Local Government) industry, with 49% of

³ The top occupations, in terms of the percent of total jobs in an industry, are identified using data from the National Occupational Employment Statistics program, projections from the National Industry-Occupation Employment Matrix, and Lightcast’s proprietary employment data.

jobs in the industry subsector. The top occupation employed by the Local Government industry subsector is elementary school teachers, except special education, which constitutes 9% of the industry subsector's jobs. It is followed by teaching assistants, except postsecondary (7%) and secondary school teachers, except special & career/technical education (5%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- police & sheriff's patrol officers (\$48.42);
- correctional officers & jailers (\$42.42);
- firefighters (\$31.07);
- first-line supervisors of office & administrative support workers (\$30.34); and
- maintenance & repair workers, general (\$22.93).

The top three highest paying occupations that require a bachelor's degree are:

- registered nurses (\$58.61);
- secondary school teachers, except special & career/technical education (\$50.71); and
- middle school teachers, except special & career/technical education (\$48.88).

The **Warehousing & Storage** industry subsector in the region supported 128,380 jobs in 2023 and had an LQ of 6.2. It is comprised of four industries at the six-digit NAICS code level. The largest industry is the General Warehousing & Storage industry, with 97% of jobs in the industry subsector. The top occupation employed by the Warehousing & Storage industry subsector is laborers & freight, stock, & material movers, hand, which constitutes 25% of the industry subsector's jobs. It is followed by industrial truck & tractor operators (20%) and stockers & order fillers (19%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- transportation, storage, & distribution managers (\$39.43);
- first-line supervisors of office & administrative support workers (\$30.34);
- first-line supervisors of transportation & material moving workers, except aircraft cargo handling supervisors (\$29.63);
- heavy & tractor-trailer truck drivers (\$24.51); and
- production, planning, & expediting clerks (\$24.18).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$48.73);
- business operations specialists, all other (\$30.16); and
- training & development specialists (\$27.18).

The **Specialty Trade Contractors** industry subsector in the region supported 100,960 jobs in 2023 and had an LQ of 1.5. It is comprised of 19 industries at the six-digit NAICS code level. The largest industry is the Plumbing, Heating, & Air-Conditioning Contractors industry, with 17% of jobs in the industry subsector. The top occupation employed by the Specialty Trade

Contractors industry subsector is carpenters, which constitutes 11% of the industry subsector's jobs. It is followed by construction laborers (9%) and electricians (7%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- operating engineers & other construction equipment operators (\$36.92);
- first-line supervisors of construction trades & extraction workers (\$36.50);
- sheet metal workers (\$30.24);
- structural iron & steel workers (\$29.64); and
- electricians (\$28.48).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$48.73);
- project management specialists (\$44.72); and
- construction managers (\$41.82).

The **Social Assistance** industry subsector in the region supported 92,260 jobs in 2023 and had an LQ of 1.7. It is comprised of nine industries at the six-digit NAICS code level. The largest industry is the Services for the Elderly & Persons with Disabilities industry, with 78% of jobs in the industry subsector. The top occupation employed by the Social Assistance industry subsector is home health & personal care aides, which constitutes 68% of the industry subsector's jobs. It is followed by childcare workers (6%) and preschool teachers, except special education (3%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- licensed practical & licensed vocational nurses (\$30.36);
- bookkeeping, accounting, & auditing clerks (\$22.90);
- secretaries & administrative assistants, except legal, medical, & executive (\$22.62);
- social & human service assistants (\$20.89); and
- office clerks, general (\$18.93).

The top three highest paying occupations that require a bachelor's degree are:

- registered nurses (\$58.61);
- general & operations managers (\$48.73); and
- social workers, all other (\$33.46).

The **Truck Transportation** industry subsector in the region supported 41,340 jobs in 2023 and had an LQ of 2.0. It is comprised of six industries at the six-digit NAICS code level. The largest industry is the General Freight Trucking, Local industry, with 30% of jobs in the industry subsector. The top occupation employed by the Truck Transportation industry subsector is heavy & tractor-trailer truck drivers, which constitutes 61% of the industry subsector's jobs. It is followed by laborers & freight, stock, & material movers, hand (9%) and light truck drivers (4%). Out of the top 25 occupations within the industry subsector, the top five highest paying

occupations that require an associate degree or below, in terms of median hourly earnings, are:

- transportation, storage, & distribution managers (\$39.43);
- first-line supervisors of mechanics, installers, & repairers (\$36.85);
- first-line supervisors of office & administrative support workers (\$30.34);
- first-line supervisors of transportation & material moving workers, except aircraft cargo handling supervisors (\$29.63); and
- bus & truck mechanics & diesel engine specialists (\$27.92).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$48.73);
- accountants & auditors (\$37.50); and
- managers, all others (\$36.31).

The **Personal & Laundry Services** industry subsector in the region supported 30,790 jobs in 2023 and had an LQ of 1.2. It is comprised of 16 industries at the six-digit NAICS code level. The largest industry is the Beauty Salons industry, with 33% of jobs in the industry subsector. The top occupation employed by the Personal & Laundry Services industry subsector is hairdressers, hairstylists, & cosmetologists, which constitutes 28% of the industry subsector's jobs. It is followed by manicurists & pedicurists (18%) and animal caretakers (8%). Out of the top 25 occupations within the industry subsector, the top five highest paying occupations that require an associate degree or below, in terms of median hourly earnings, are:

- first-line supervisors of personal service workers (\$22.61);
- massage therapists (\$21.32);
- morticians, undertakers, & funeral arrangers (\$20.72);
- office clerks, general (\$18.93); and
- customer service representatives (\$18.48).

The top three highest paying occupations that require a bachelor's degree are:

- general & operations managers (\$48.73);
- managers, all other (\$36.31); and
- fine artists, including painters, sculptors, & illustrators (\$13.23).

ARTIFICIAL INTELLIGENCE

The continued adoption of Artificial Intelligence (AI) has caused fluctuations within the job market across various occupations ranging from software engineering to marketing, and the way in which workers interact with AI has caused some uncertainty. As more companies attempt to adapt to this technological advancement, the demand for AI-related skills within the workforce continues to grow, as does the number of job postings that list AI-related skills specifically. As a result, the fluctuation in demand for these specialized skills may be observed. This approach, focusing on job postings that include AI-related skills, differs from the rest of this report which is centered on the most prevalent occupations and industries in the Inland Empire in terms of jobs and LQ. When analyzing these job postings, the presence of specific skills is used to filter for occupations, resulting in data demonstrating the demand for these skills in the regional economy. Additionally, the term 'artificial intelligence' can be applied to a range of work, the most popular of which now is generative artificial intelligence. In addition to 'generative AI' or 'natural language processing' this job postings data also includes postings for jobs involving autonomous driving, neural networks, machine learning, robotics, and visual image recognition. The top occupations in terms of prevalence of AI-related skills are:

Table 2.11: Jobs Postings with AI Related Skills by Total number of Postings

Occupation (SOC)	Total Postings
Software Developers	324
Maintenance and Repair Workers, General	300
Medical and Health Services Managers	294
Teaching Assistants, Except Postsecondary	270
Laborers and Freight, Stock, and Material Movers, Hand	236
Data Scientists	174
Computer Occupations, All Other	168
Marketing Managers	159
Postsecondary Teachers	154
Computer Programmers	132
First-Line Supervisors of Production and Operating Workers	113
Transportation, Storage, and Distribution Managers	89
Writers and Authors	85
Customer Service Representatives	84
Automotive Service Technicians and Mechanics	77
Mechanical Engineers	71
General and Operations Managers	67
Airline Pilots, Copilots, and Flight Engineers	64
Commercial Pilots	60
Industrial Engineers	59
Market Research Analysts and Marketing Specialists	56
Avionics Technicians	56
Electrical Engineers	49
Management Analysts	48
Human Resources Specialists	41

Additional data are included in the accompanying data tables.

UNEMPLOYMENT

Unemployment data identifies areas in which skills may mismatch with the region’s current employment opportunities or where SBCCD could provide appropriate training programs best suited to transitioning unemployed workers into in-demand occupations. The tables and figures in this section present unemployment in the Inland Empire as the number of people unemployed by two-digit industry sector and by two-digit occupational group.⁴

Lightcast industry- and occupation-specific unemployment estimates are derived from several federal sources. They are Characteristics of the Insured Unemployed (CIU) at the Department of Labor, Employment, & Training Administration; Local Area Unemployment Statistics (LAUS) from the Bureau of Labor Statistics (BLS); and the Current Population Survey (CPS) at the Census. Lightcast final industry and occupation data, as well as state-specific data, are also used. The numbers and percentages reflect the monthly average for the 12 months preceding January 2024 and follow the same methodology as federal statistical agencies. The unemployment rate is not provided because it is difficult to accurately determine the size of the labor force in an industry or occupation every month. However, it appears for a full region in a following section titled Socioeconomic Indicators. In this section, rather than the unemployment rate, the percent of all unemployed workers in the Inland Empire, California, and the U.S. are provided.

Table 2.2: Unemployed Workers by Industry Sector in the Inland Empire with State and National Comparisons

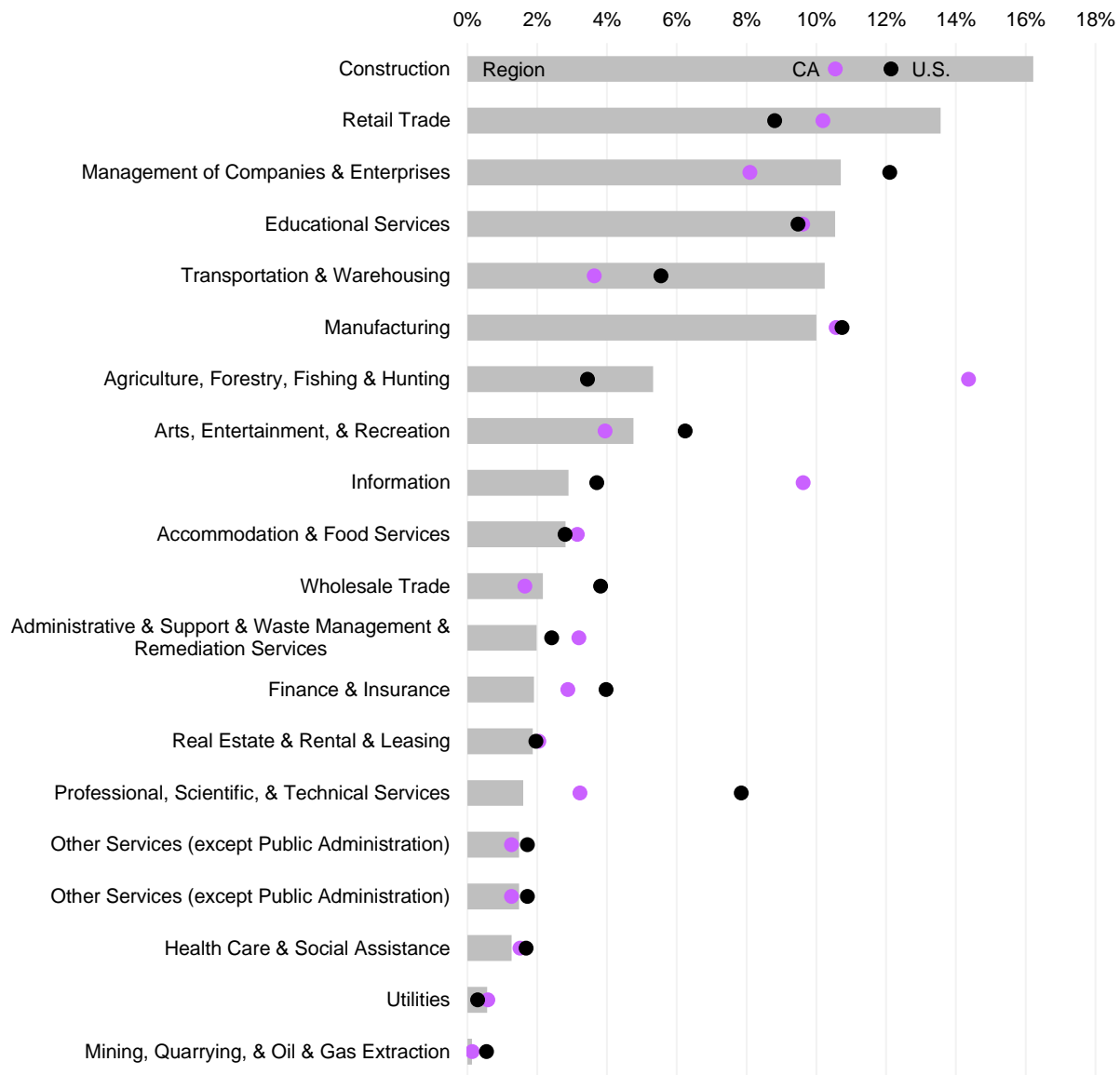
NAICS CODE	NAICS TITLE	REGION UNEMPLOYED	REGION % UNEMPLOYED	STATE % UNEMPLOYED	U.S. % UNEMPLOYED
23	Construction	17,063	16%	11%	12%
44	Retail Trade	14,271	14%	10%	9%
56	Management of Companies & Enterprises	11,256	11%	8%	12%
62	Educational Services	11,086	11%	10%	9%
48	Transportation & Warehousing	10,774	10%	4%	6%
31	Manufacturing	10,518	10%	11%	11%
11	Agriculture, Forestry, Fishing & Hunting	5,599	5%	14%	3%
72	Arts, Entertainment, & Recreation	5,005	5%	4%	6%
51	Information	3,046	3%	10%	4%
81	Accommodation & Food Services	2,956	3%	3%	3%
42	Wholesale Trade	2,276	2%	2%	4%

⁴ Industry data reported elsewhere in the analysis are at the three-digit NAICS code level, referred to as industry subsectors. Occupation data reported elsewhere are also at a more detailed level, simply referred to as occupations at the six-digit SOC code level.

NAICS CODE	NAICS TITLE	REGION UNEMPLOYED	REGION % UNEMPLOYED	STATE % UNEMPLOYED	U.S. % UNEMPLOYED
61	Administrative & Support & Waste Management & Remediation Services	2,084	2%	3%	2%
52	Finance & Insurance	2,009	2%	3%	4%
53	Real Estate & Rental & Leasing	1,973	2%	2%	2%
54	Professional, Scientific, & Technical Services	1,677	2%	3%	8%
90	Other Services (except Public Administration)	1,555	1%	1%	2%
90	Other Services (except Public Administration)	1,555	1%	1%	2%
71	Health Care & Social Assistance	1,330	1%	1%	2%
22	Utilities	599	1%	1%	0%
21	Mining, Quarrying, & Oil & Gas Extraction	133	0%	0%	1%
	Total	106,766	100%	100%	100%

Source: Lightcast Total Unemployment (monthly average for the 12 months preceding January 2024).

Figure 2.11: Unemployed Workers by Industry Sector in the Inland Empire with State and National Comparisons



Source: Lightcast Total Unemployment (monthly average for the 12 months preceding January 2024).

Table 2.3: Unemployed Workers by Occupational Group in the Inland Empire with State and National Comparisons

SOC CODE	SOC TITLE	REGION UNEMPLOYED	REGION % UNEMPLOYED	STATE % UNEMPLOYED	U.S. % UNEMPLOYED
53-0000	Transportation & Material Moving	17,235	16%	10%	9%
47-0000	Construction & Extraction	16,229	15%	12%	11%
43-0000	Office & Administrative Support	12,046	11%	12%	13%
51-0000	Production	8,686	8%	8%	9%
11-0000	Management	8,445	8%	11%	11%
41-0000	Sales & Related	7,701	7%	7%	7%
35-0000	Food Preparation & Serving Related	6,503	6%	6%	6%
49-0000	Installation, Maintenance, & Repair	4,547	4%	4%	4%
13-0000	Business & Financial Operations	3,905	4%	5%	6%
37-0000	Building & Grounds Cleaning & Maintenance	3,694	4%	4%	3%
31-0000	Healthcare Support	3,262	3%	3%	3%
25-0000	Education, Training, & Library	2,228	2%	2%	2%
29-0000	Healthcare Practitioners & Technical	2,097	2%	2%	2%
33-0000	Protective Service	1,613	2%	1%	1%
39-0000	Personal Care & Service	1,610	2%	2%	2%
15-0000	Computer & Mathematical	1,267	1%	3%	3%
27-0000	Arts, Design, Entertainment, Sports, & Media	1,064	1%	2%	2%
21-0000	Community & Social Service	1,016	1%	1%	1%
17-0000	Architecture & Engineering	777	1%	1%	1%
19-0000	Life, Physical, & Social Science	497	0%	1%	1%
45-0000	Farming, Fishing, & Forestry	431	0%	2%	1%
23-0000	Legal	242	0%	1%	1%
55-0000	Military	118	0%	0%	0%
	Total	105,210	100%	100%	100%

Source: Lightcast Total Unemployment (monthly average for the 12 months preceding January 2024).

Figure 2.12: Unemployed Workers by Occupational Group in the Inland Empire with State and National Comparisons



Source: Lightcast Total Unemployment (monthly average for the 12 months preceding January 2024).

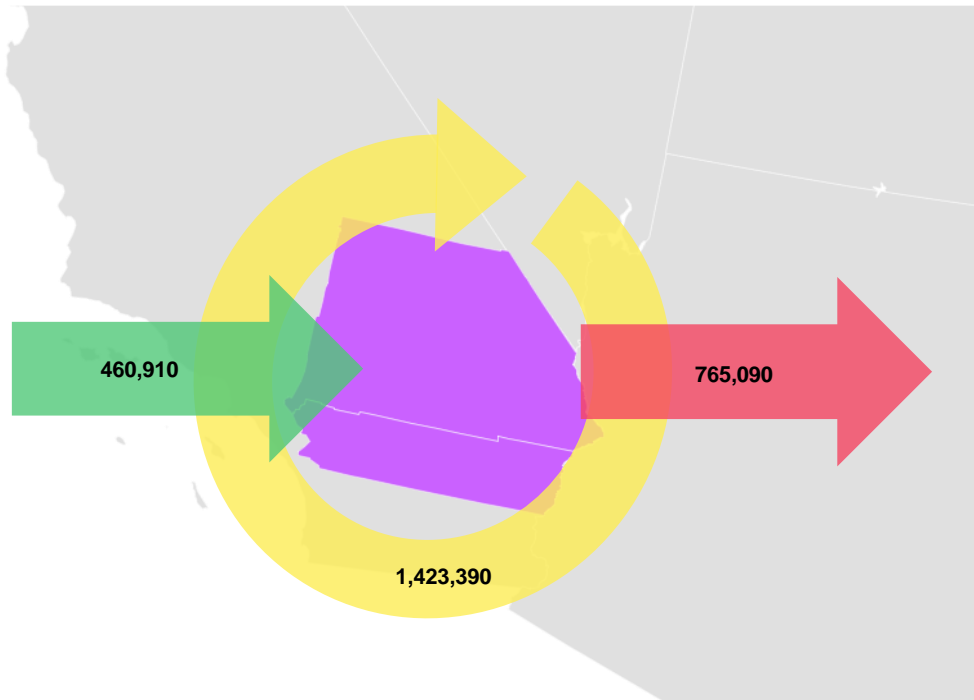
WORKFORCE COMMUTING PATTERNS

The Longitudinal Employer-Household Dynamics (LEHD) program⁵ at the U.S. Census Bureau provides information on the residential and employment locations of workers. Such data show the commuting patterns of regional employees. More specifically, the LEHD data demonstrates the extent to which employees commute to the Inland Empire for work and how many residents commute to surrounding communities for work. Workers from outside the region could be filling current employment gaps, or the region's residents could be out-commuting when there is a surplus of available jobs. The concepts of a "gap" and "surplus" are discussed in greater detail in the first section of Chapter 3.

Figure 2.13 presents the inflow and outflow of jobs to and from the Inland Empire. LEHD data identifies 1.9 million jobs in the region, with 1.4 million jobs filled by residents and 460,910 jobs filled by people living outside the region. In addition, 765,090 jobs are held by the region's residents outside the Inland Empire. In other words, 765,090 residents commute outside the region for work. The job counts represent primary jobs, as opposed to all jobs, and differ slightly from job counts in the previous sections, which use Lightcast's complete employment data (see industry data in Appendix 2). As shown in the figure, slightly more workers out-commute than in-commute.

⁵ LEHD is an innovative program that uses modern statistical and computing techniques to combine federal and state administrative data on employers and employees with core Census Bureau censuses and surveys while protecting the confidentiality of people and firms that provide the data.

Figure 2.13: Inland Empire Job Inflow and Outflow

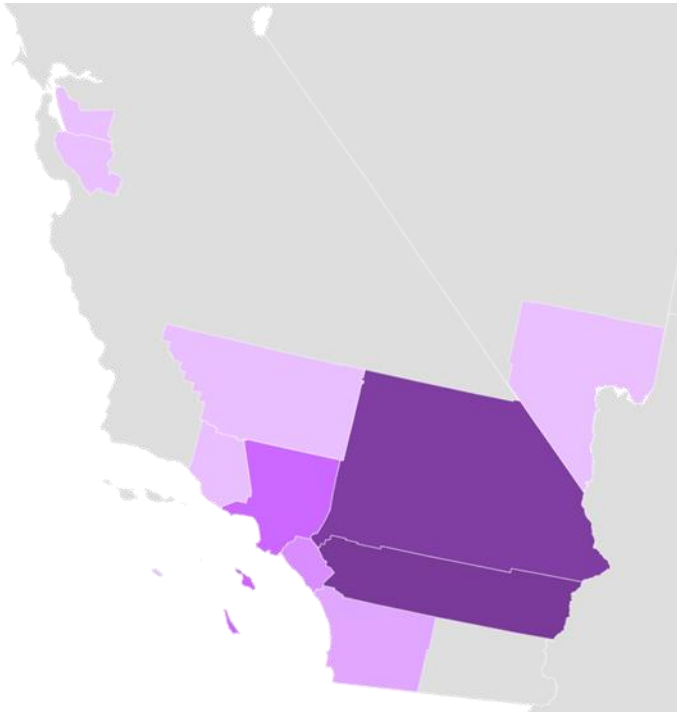


460,910	Employed in but living outside the region
1,423,390	Living and employed in the region
765,090	Living in the region but employed outside

Source: Census Bureau, Center for Economic Studies.

Figure 2.14 and Table 2.4 provide further insight into the places where the region's residents work. As shown in the figure, the region's residents are out-commuting to neighboring counties for work, but the greatest number of residents work in Riverside County, CA (33% of all jobs). Figure 2.15 and Table 2.5 also show commuting patterns, except the data highlight the counties in which the region's workers reside.

Figure 2.14: Counties where Inland Empire Residents Work



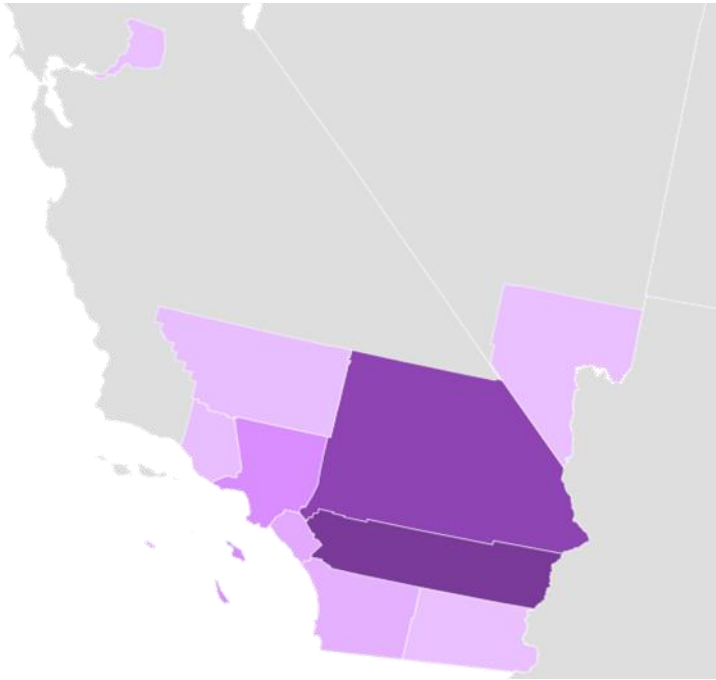
Source: Census Bureau, Center for Economic Studies.

Table 2.4: Counties where Inland Empire Residents Work

COUNTY OF EMPLOYMENT	JOBS	% JOBS
Riverside County, CA	727,550	33%
San Bernardino County, CA	695,840	32%
Los Angeles County, CA	340,340	16%
Orange County, CA	201,160	9%
San Diego County, CA	104,730	5%
Kern County, CA	11,250	1%
Ventura County, CA	11,090	1%
Alameda County, CA	7,670	0%
Santa Clara County, CA	6,890	0%
Clark County, NV	6,630	0%
All Other Locations	75,350	3%
Total Primary Jobs, Residents	2,188,490	100%

Source: Census Bureau, Center for Economic Studies.

Figure 2.15: Counties where Inland Empire Workers Live



Source: Census Bureau, Center for Economic Studies.

Table 2.5: Counties where Inland Empire Workers Live

COUNTY OF RESIDENCE	JOBS	% JOBS
Riverside County, CA	760,870	40%
San Bernardino County, CA	662,520	35%
Los Angeles County, CA	205,960	11%
Orange County, CA	97,220	5%
San Diego County, CA	64,540	3%
Kern County, CA	12,530	1%
Ventura County, CA	11,320	1%
Imperial County, CA	5,430	0%
Clark County, NV	5,290	0%
Sacramento County, CA	3,640	0%
All Other Locations	54,990	3%
Total Primary Jobs, Workers	1,884,300	100%

Source: Census Bureau, Center for Economic Studies.

OCCUPATIONS OF REGIONAL RESIDENTS

This section combines occupational data with employment information on Inland Empire residents. Essentially, the data identify the occupational groups that SBCCD’s programs should be targeting based upon the jobs of the region’s residents. The final results, which appear in Table 2.6 and Table 2.7, show which occupational groups are undersupplied or oversupplied by the region’s residents, respectively. As for the source of the data, the number of jobs within an occupation is based on Lightcast’s industry data and staffing patterns, and we use data from LEHD Origin-Destination Employment Statistics (LODES) to determine how many Inland Empire residents are employed in the region’s occupations. Specifically, the LODES originate from Origin and Destination (OD) data, Regional Area Characteristics (RAC), and Workforce Area Characteristics (WAC).

Material moving workers were the highest-ranked occupational group, in terms of its need for non-regional residents (Table 2.6). As shown, 180,900 residents of the Inland Empire were employed in the occupational group in 2023, but the region supported 192,574 such workers. Therefore, 11,670 non-regional residents were employed in the occupational group in the Inland Empire in 2023, accounting for the vast majority of the region’s net in-commuters.

Table 2.6: Top Occupational Groups by Net In-Commuters for Jobs in the Inland Empire

SOC CODE	SOC TITLE	2023 NET IN-COMMUTERS	2023 RESIDENT WORKERS	2023 JOBS	2033 JOBS	JOB CHANGE
53-7000	Material Moving Workers	11,673	180,900	192,574	229,823	37,249
53-4000	Rail Transportation Workers	37	1,914	1,951	2,144	193

Source: Employees & Self-Employed 2024.1.

On the other hand, construction trades workers were the lowest-ranked occupational group, in terms of their need for non-regional residents (Table 2.7). As shown, 104,790 residents of the Inland Empire were employed in the occupational group in 2023, but the region supported 87,630 such workers. Therefore, 17,160 residents were employed in the occupational group elsewhere in 2023, representing 5.4% of the region’s net out-commuters (Figure 2.16). Business operations specialists and home health & personal care aides; & nursing assistants, orderlies, & psychiatric aides were the second and third ranked occupational groups, with 5.1% and 5% of the region's net out-commuters, respectively.

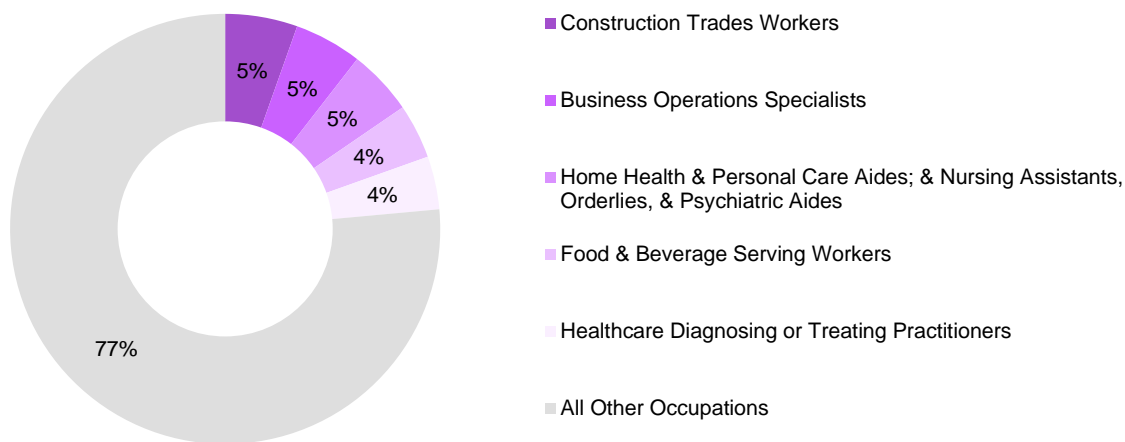
Table 2.7: Top Occupational Groups by Net Out-Commuters for Jobs in the Inland Empire

SOC CODE	SOC TITLE	2023 NET OUT-COMMUTERS	2023 RESIDENT WORKERS	2023 JOBS	2033 JOBS	JOB CHANGE
47-2000	Construction Trades Workers	17,165	104,794	87,629	96,298	8,668
13-1000	Business Operations Specialists	16,065	75,451	59,385	67,920	8,535

SOC CODE	SOC TITLE	2023 NET OUT-COMMUTERS	2023 RESIDENT WORKERS	2023 JOBS	2033 JOBS	JOB CHANGE
31-1100	Home Health & Personal Care Aides; & Nursing Assistants, Orderlies, & Psychiatric Aides	15,557	108,996	93,439	131,180	37,741
35-3000	Food & Beverage Serving Workers	12,970	89,580	76,610	91,567	14,958
29-1000	Healthcare Diagnosing or Treating Practitioners	12,614	76,212	63,598	77,582	13,984
37-2000	Building Cleaning & Pest Control Workers	11,302	52,733	41,431	46,343	4,912
11-9000	Other Management Occupations	10,636	58,011	47,375	53,998	6,623
15-1200	Computer Occupations	9,621	31,263	21,642	25,362	3,720
43-4000	Information & Record Clerks	9,544	54,998	45,455	49,981	4,526
35-2000	Cooks & Food Preparation Workers	7,963	59,106	51,143	59,901	8,758
21-1000	Counselors, Social Workers, & Other Community & Social Service Specialists	7,801	37,008	29,208	35,902	6,695
43-6000	Secretaries & Administrative Assistants	7,334	40,555	33,221	35,148	1,927
43-9000	Other Office & Administrative Support Workers	7,228	39,813	32,585	34,258	1,673
53-3000	Motor Vehicle Operators	6,917	83,042	76,125	92,729	16,604
13-2000	Financial Specialists	6,640	26,055	19,415	20,891	1,476

Source: Employees & Self-Employed 2024.1.

Figure 2.16: Top Five Occupational Groups by Net Out-Commuters for Jobs in the Inland Empire



Source: Employees & Self-Employed 2024.1.

EDUCATIONAL ATTAINMENT

Educational attainment data are useful for targeting specific population groups with low education levels. The population and educational attainment numbers in this section are based

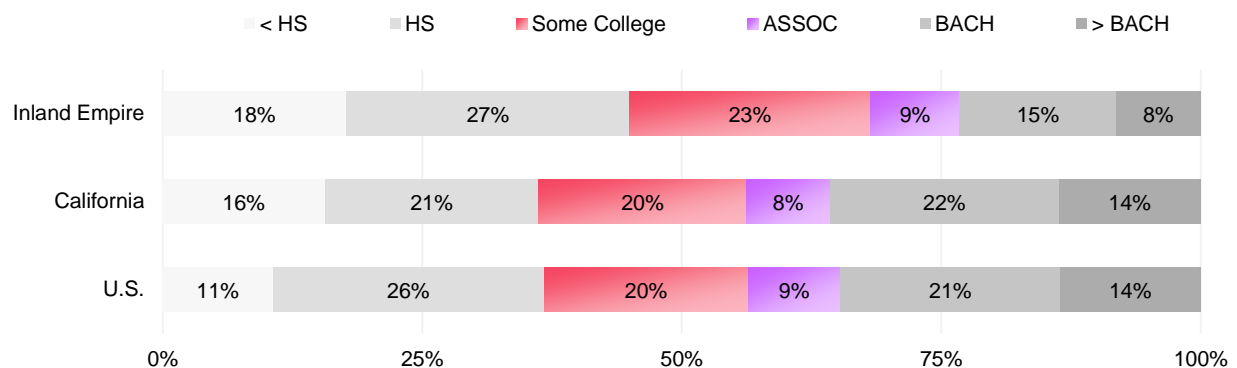
on Lightcast’s demographic data and publicly available sources from state and federal agencies. Sources include annual population estimates and population projections from the U.S. Census Bureau and birth and mortality rates from the U.S. Health Department. In addition, demographic information relies on the annual results of the American Community Survey. Educational attainment data cover the population in the Inland Empire aged 25 years or more, referred to as adults, and indicate the highest award level achieved.

Demographic information is presented by gender and the major race and ethnic groups, and educational attainment data are broken out according to the following award categories:

- Less than a high school diploma (<HS);
- High school diploma or equivalent (HS);
- Some college;⁶
- Associate degree (Assoc);
- Bachelor’s degree (Bach);
- Greater than a bachelor’s degree (>Bach).

About 3.1 million adults live in the Inland Empire, and Figure 2.17 displays their educational attainments, without reference to gender and the major race and ethnic groups. State and national data are also presented for context. In the region, 45% of adults have a high school diploma or less, which is more than the state average (36%) and more than the national average (37%). Out of all the award categories in the figure, the people who are most likely to seek education and training from SBCCD are those in the “Less than High School Diploma,” “High School Diploma,” and “Some College” categories. Together, these categories total 2.1 million people, or 68% of the region’s adults.

Figure 2.17: Highest Educational Attainments of Adults in the Inland Empire, California, and the U.S.



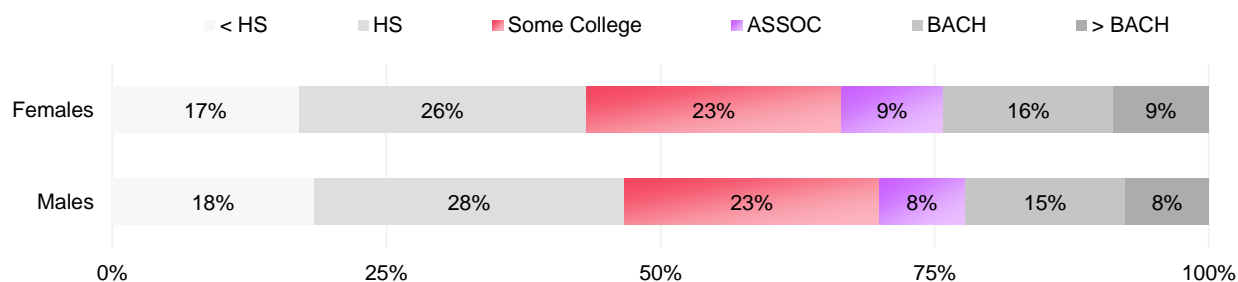
Numbers may not sum due to rounding.

Source: Lightcast demographics data and U.S. Census Bureau, American Community Survey.

⁶ The “Some College” category includes individuals who attended college but did not successfully obtain a degree and individuals who have received a postsecondary vocational award or professional certification but did not receive an associate or bachelor’s degree.

Between female and male adults in the Inland Empire, there is little variation in the distribution of their award categories. Twenty-three percent of the region’s female and male adults have some college education but no degree, which represent 358,940 females and 355,590 males. Nine percent of female adults and eight percent of male adults in the region have an associate degree as their highest award level. This information appears in Figure 2.18.

Figure 2.18: Highest Educational Attainments of Adults in the Inland Empire by Gender



Numbers may not sum due to rounding.

Source: Lightcast demographics data and U.S. Census Bureau, American Community Survey.

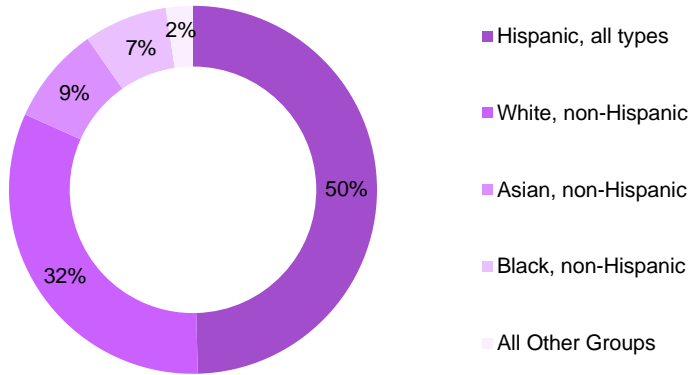
Table 2.8 and Figure 2.19 show the adults in the Inland Empire by the major race and ethnic groups. As shown, 49.6% of the region’s adults are Hispanic, all types. Another 32.1% of adults are White, non-Hispanic, and 8.6% are Asian, non-Hispanic, the next largest groups. Altogether, less than 10% percent of the region’s adults are Black, non-Hispanic; Two or more races, non-Hispanic; American Indian or Alaskan Native, non-Hispanic; and Native Hawaiian or Pacific Islander, non-Hispanic.

Table 2.8: Adults in the Inland Empire by Major Race and Ethnic Groups

GROUP	POPULATION	% POPULATION
Hispanic, all types	1,524,066	49.6%
White, non-Hispanic	987,686	32.1%
Asian, non-Hispanic	263,917	8.6%
Black, non-Hispanic	225,323	7.3%
Two or more races, non-Hispanic	50,046	1.6%
American Indian or Alaskan Native, non-Hispanic	13,439	0.4%
Native Hawaiian or Pacific Islander, non-Hispanic	9,410	0.3%
Total	3,073,888	100%

Source: Lightcast demographics data and U.S. Census Bureau, American Community Survey.

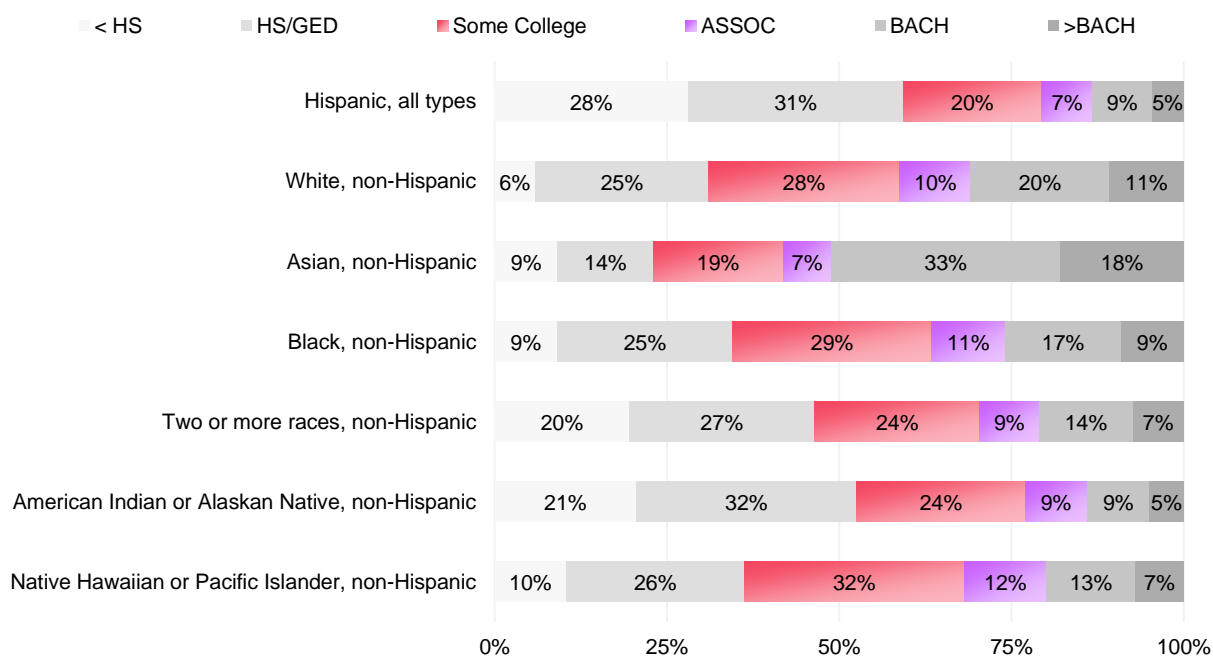
Figure 2.19: Adults in the Inland Empire by Major Race and Ethnic Groups



Source: Lightcast demographics data and U.S. Census Bureau, American Community Survey.

Figure 2.20 displays the highest educational attainment of the Inland Empire’s adults by their major race and ethnic groups. Asian, non-Hispanic adults have the highest percentage of adults with a postsecondary education (77%) among all the groups. The White, non-Hispanic group follows with 69%. Hispanic, all types of adults and American Indian or Alaskan Native, non-Hispanic adults have the lowest levels of educational attainment in the region. For these groups, only 41% and 47%, respectively, of the adults in the groups have had education beyond high school. Across all groups, these data suggest that there are many opportunities to increase the educational attainments of the region’s adults, whether such actions involve outreach to local high schools or supporting SBCCD students who plan to transfer into a bachelor’s degree level program.

Figure 2.20: Highest Educational Attainments of Adults in the Inland Empire by Major Race and Ethnic Groups



Numbers may not sum due to rounding.

Source: Lightcast demographics data and U.S. Census Bureau, American Community Survey.

SOCIOECONOMIC INDICATORS

The Inland Empire’s high job growth, productive industries, and growing population are positive economic attributes. The data in this section show several of the region’s socioeconomic indicators. Household income, reported as a median annual value, includes the income of all individuals in a household, 15 years and over, whether they are related to the householder or not. The unemployment rate and percentage of workers unemployed are annual estimates. Per capita income is calculated as the mean income for every person in the area divided by the aggregate income of the total population. Finally, data on poverty are also presented in this section. The data come directly from American Community Survey five-year estimates.

Table 2.9: Income, Unemployment, and Poverty Characteristics for Census County Subdivisions in the Inland Empire

CENSUS COUNTY SUBDIVISION	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	PER CAPITA INCOME	POVERTY ALL PEOPLE
Riverside County	\$84,505	6.7%	\$35,356	11.4%
Norco	\$120,066	3.9%	\$39,527	5.4%
Murrieta	\$112,552	6.3%	\$42,494	6.7%

CENSUS COUNTY SUBDIVISION	MEDIAN HOUSEHOLD INCOME	UNEMPLOYMENT RATE	PER CAPITA INCOME	POVERTY ALL PEOPLE
Lake Mathews	\$111,764	6.2%	\$37,145	10.8%
Jurupa	\$110,533	5.8%	\$34,515	7.9%
Corona	\$103,373	4.3%	\$38,686	8.5%
Elsinore Valley	\$96,172	5.8%	\$36,646	10.5%
Perris Valley	\$85,531	7.2%	\$30,552	10.4%
Riverside	\$82,467	6.5%	\$30,146	13.0%
San Geronio Pass	\$81,014	6.2%	\$34,249	11.4%
Cathedral City-Palm Desert	\$77,348	7.2%	\$53,889	13.9%
Palm Springs	\$66,265	8.2%	\$61,346	14.1%
Coachella Valley	\$65,105	9.3%	\$34,262	12.8%
Idyllwild	\$63,319	9.1%	\$39,795	12.2%
Hemet-San Jacinto	\$58,689	8.8%	\$25,749	17.5%
Blythe	\$51,814	7.0%	\$24,427	23.4%
Desert Hot Springs	\$49,519	6.8%	\$24,997	18.9%
Chuckwalla Valley	\$49,077	14.8%	\$10,308	12.7%
San Bernardino County	\$77,423	7.2%	\$31,348	13.8%
Ontario	\$95,674	5.5%	\$38,102	9.7%
Yucaipa	\$85,321	6.8%	\$36,895	8.5%
Lake Arrowhead	\$82,900	5.9%	\$44,409	11.9%
San Bernardino	\$75,627	7.2%	\$28,202	14.5%
Big Bear	\$73,250	6.5%	\$37,982	13.6%
Victorville-Hesperia	\$67,027	10.0%	\$25,827	17.7%
Newberry Springs-Baker	\$62,705	18.3%	\$26,066	15.3%
Mount Baldy-Wrightwood	\$62,283	4.0%	\$51,781	14.6%
Barstow	\$59,828	9.3%	\$29,148	19.2%
Searles Valley	\$54,276	7.6%	\$24,426	20.0%
Twentynine Palms-Yucca Valley	\$49,694	8.3%	\$29,390	20.2%
Needles	\$39,631	15.3%	\$28,518	25.8%

Source: American Community Survey 2022 five-year estimates from the U.S. Census Bureau Data.



Program Demand Gap Analysis

With the region's top industry subsectors and workforce in mind, the program demand gap analysis can now be conducted, answering the following question:

Where are there misalignments between the workforce demand and the supply of the district completions?

This chapter outlines the deficit of SBCCD's program completers to the workforce (gap), as well as the oversupply of completions to the workforce (surplus). The occupations directly related or mapped to the significant gaps are also displayed. Figure 3.1, below, provides a high level overview of the district's programs and their alignment with the Inland Empire workforce.

Opportunities for Growth programs are those that have a high number of annual job openings but lack of adequate regional completers. These programs have large gaps and should be considered for expansion since there is a demand for people with these skill sets. Consideration should be given to the median hourly wage of the program.

Focus on Program Quality programs are those that have a high number of annual job openings as well as a high number of regional completers. These programs are satisfying the region's labor market demands and are worth continuing offering.

Low Activity Programs are those that lack both annual job openings and completers in the Inland Empire. Since there is not an apparent need for these skill sets in the regional workforce, it is worth reevaluating the need for offering these programs.

Communicate with Industry Partners programs are those that produce far more regional completers than there are annual job openings. Large surpluses could suggest that completers are finding employment outside of the region. It may be beneficial to track where completers are finding work to evaluate the skills being sought by employers to better prepare completers for in-region employment.

Figure 3.1: Key Findings on SBCCD’s Program Alignment with the Inland Empire Workforce

<p>Opportunities for Growth</p> <p><i>How can we expand these program opportunities?</i></p> <p>Business Administration & Management, General (CERT, ASSOC & T-T)</p> <p>Welding Technology/Welder (CERT & ASSOC) Manufacturing Engineering Technology/Technician (CERT)</p> <p>Automobile/Automotive Mechanics Technology/Technician (CERT)</p> <p>Diesel Mechanics Technology/Technician (CERT)</p> <p>Electrical & Power Transmission Installation/Installer, General (CERT & ASSOC)</p> <p>Early Childhood Education & Teaching (T-T) Spanish Language & Literature (T-T)</p>	<p>Focus on Program Quality</p> <p><i>Can we maintain focus on program quality & student success?</i></p> <p>Criminal Justice/Police Science (CERT, ASSOC & T-T)</p> <p>Information Technology (ASSOC)</p> <p>Chemistry, General (ASSOC)</p> <p>Registered Nursing/Registered Nurse (ASSOC)</p> <p>Psychology, General (T-T)</p> <p>Biology/Biological Sciences, General (T-T)</p>
<p>Low Activity Programs</p> <p><i>Should we reevaluate these programs?</i></p> <p>Foodservice Systems Administration/Management (CERT)</p> <p>Dietitian Assistant (CERT) Astronomy (ASSOC)</p> <p>Radio & Television Broadcasting Technology/Technician (ASSOC)</p>	<p>Communicate with Industry Partners</p> <p><i>Are we connecting these programs to opportunities outside the region?</i></p> <p>(EMT Paramedic) (CERT)</p> <p>Psychology, General (ASSOC)</p> <p>Biological & Physical Sciences (ASSOC)</p> <p>Sociology, General (T-T)</p>

Source: Lightcast program demand gap model.

INTERPRETATION

The terms used in the analysis are as follows:

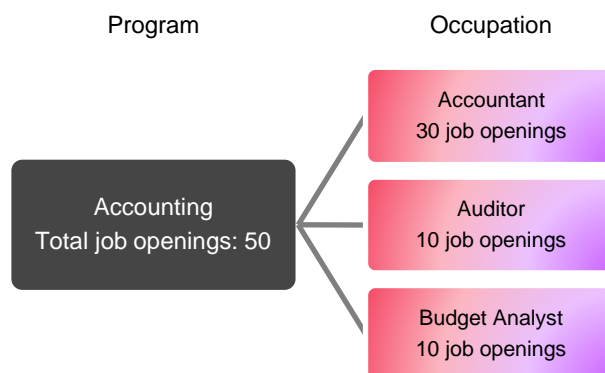
Gap Represents a deficit, or when there are more job openings in an occupation than there are completions. If left unaddressed, a gap may lead to missed opportunities for economic growth and put stress on local businesses to find the necessary talent elsewhere. Significant gaps translate into higher human resources costs and decreased efficiencies in the economic system. They also provide an opportunity for postsecondary educational institutions to develop new programs and/or strengthen their current programs.

Surplus Represents an oversupply, or when there are more completions than there are job openings in an occupation. If left unaddressed, significant surpluses may lead to higher unemployment rates or higher attrition rates—the district could be educating a workforce that is leaving the region after program completion because of a lack of job opportunities.

When reviewing the results of the analysis, consider that not all gaps or surpluses indicate necessary program adjustments. Due to labor market inefficiencies, it is common for most programs to face a certain level of gap or surplus. This means only significant gaps or surpluses should be reviewed or further developed. Given the size and characteristics of the Inland Empire, any gap or surplus within 500 jobs either above or below zero should be considered within the normal range of labor market fluctuations. In the following sections, the program gaps and surpluses are discussed by award level and presented as figures and tables.

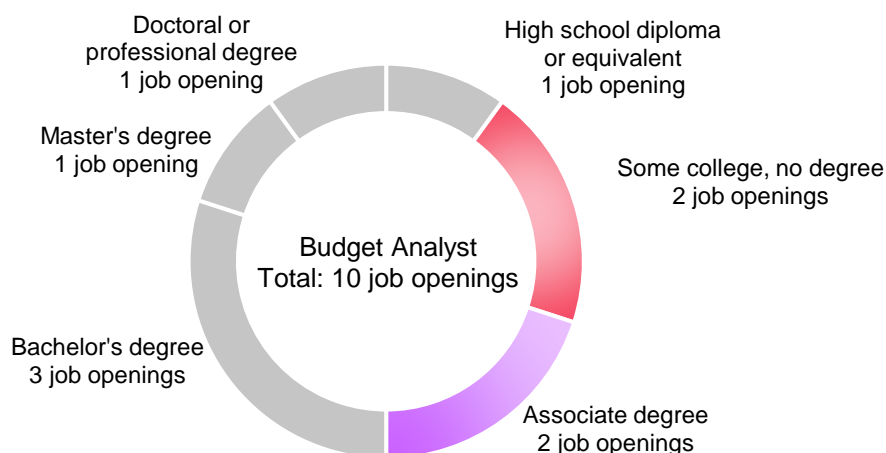
The figures show the gap between job demand and the supply of program completions. An explanation of job demand is warranted here, and a more detailed description can be found in Appendix 5. A program’s job demand is measured as its total number of annual job openings, on average, from 2023 to 2033. The total is calculated as the sum of the regional job openings for each occupation mapped to the program, as illustrated in Figure 3.2.

Figure 3.2: Example of One Program Mapped to Three Occupations



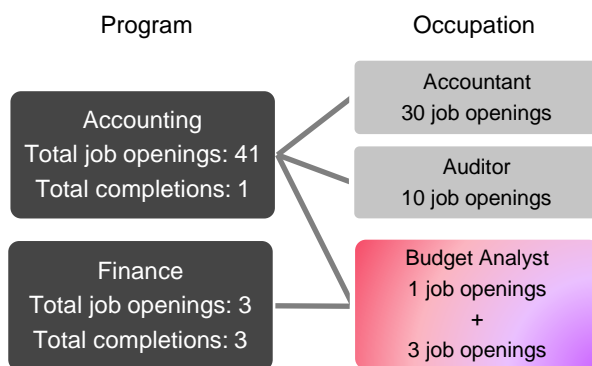
Furthermore, an occupation’s job openings are not a gross measure of job openings available in the region. For every occupation, job openings have been weighted by the program’s award level and one level below and account for the highest educational attainments of those employed in the position. Figure 3.3 illustrates how this methodology applies to an occupation’s total job openings. For example, four job openings or 40% of total job openings are available to budget analysts at the associate degree level, seeing that there are a total of 10 job openings, 20% of those working in the occupation have an associate degree level of education, and another 20% have some college education and no degree.

Figure 3.3: Example of an Occupation's Weighted Job Openings by Award Level



Finally, job openings are de-duplicated and scaled across programs when an occupation is mapped to more than one program. As illustrated in Figure 3.4, budget analysts, which have four total job openings, are mapped to two programs. However, the Finance program is three-times the size of the Accounting program, measured in terms of completions. Thus, one job opening is portioned to the Accounting program and three job openings to the Finance program.

Figure 3.4: Example of Two Programs with One Shared Occupation



Supply is shown as the average number of program completions in the region, by award level, between 2020 and 2022.⁷ SBCCD does not represent the only postsecondary educational institutions in the Inland Empire reporting to IPEDS,⁸ the source of the completions data. The gap, then, is the difference between job openings and program completions. Appendix 4 has

⁷ The average annual completions data for SBCCD were updated to the years 2021 to 2023 and reviewed for accuracy by SBCCD.

⁸ IPEDS refers to the Integrated Postsecondary Education Data System, which gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid program.

SBCCD's program to occupation map with adjusted employment, and Appendix 5 identifies all the certificate and degree-granting institutions in the Inland Empire.

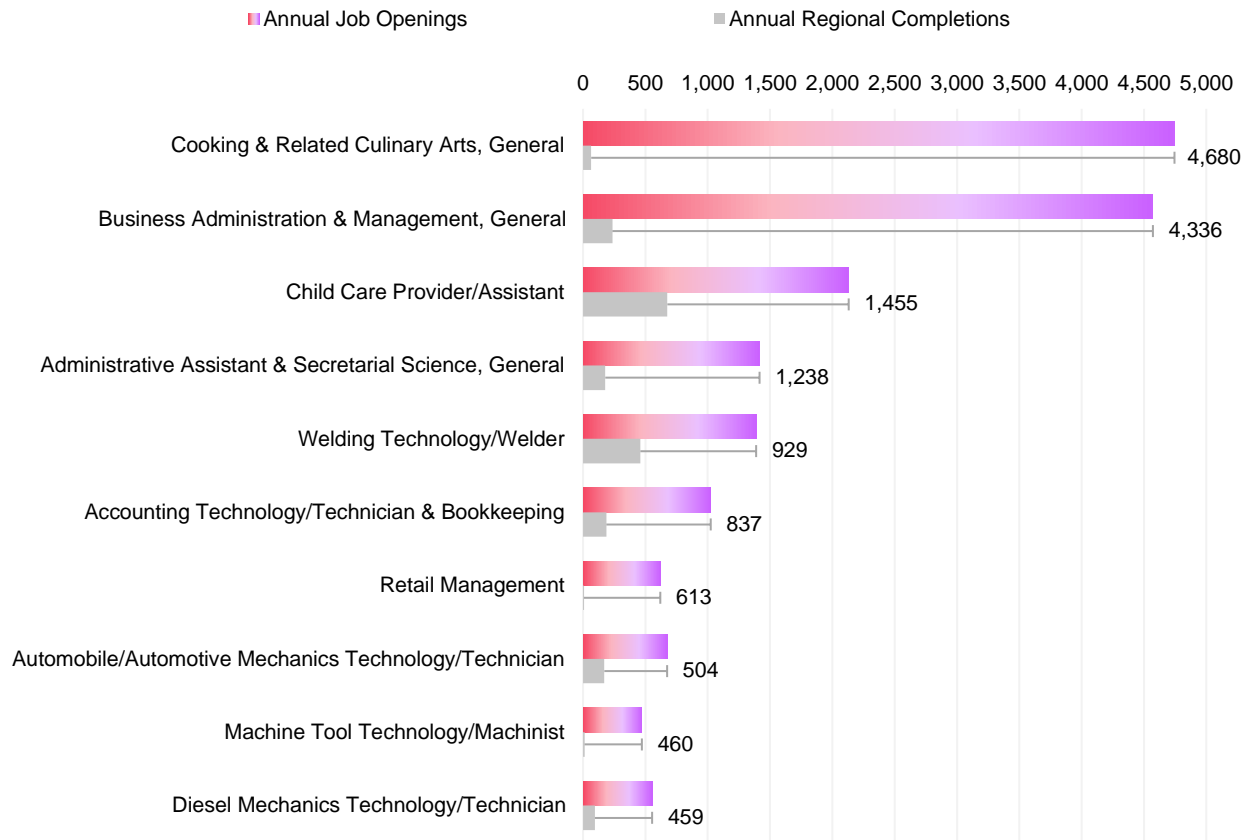
A great amount of data is presented in the tables. The first set shows the gaps and surpluses across all the programs offered at SBCCD by award level. The tables include the Classification of Instructional Program (CIP) code and title, the average annual number of job openings associated with the program (which have been de-duplicated using the process outlined in Appendix 5), the average annual program completions from the region and from SBCCD, and the gap or surplus for the Inland Empire. The programs' median hourly wage rates are specific to the Inland Empire.

The second set of tables identify the occupations mapped to the programs with a significant gap or surplus, by award level, and show detailed occupational data. The tables include the CIP code, CIP title, and occupations mapped to the program, by their Standard Occupational Classification (SOC) codes and titles. The regional job counts, by occupation, are shown for 2023 and 2033 with the change in jobs and average annual job openings for those years. The occupations' median hourly wage rates are specific to the Inland Empire. See Appendix 6 for a complete list of job projections and Appendix 7 for unemployment information by industry and occupation.

CERTIFICATE LEVEL ANALYSIS

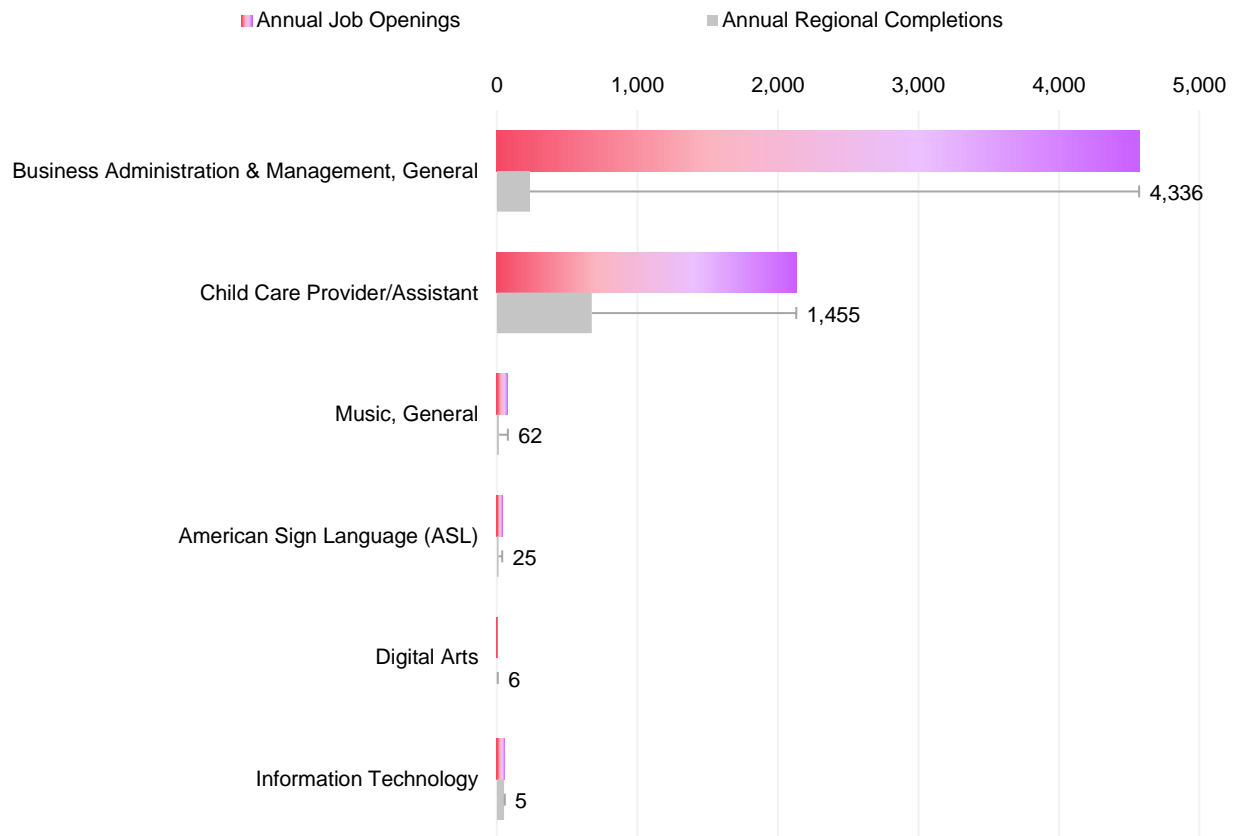
Certificates are reported to IPEDS as awards of less than one academic year and awards of at least one but less than two academic years. In this section, SBCCD's unique certificate level programs aggregate into 61 programs, when they are classified by their six-digit CIP codes. Additionally, one of SBCCD's non-credit programs is evaluated here as well. Average projected annual job openings consider someone with a high school diploma level of education and some college education but no degree. Furthermore, an occupation's job openings are weighted by the number of other programs mapped to an occupation and scaled according to a program's completions.

Figure 3.5: SBVC's Top 10 Certificate Level Programs with a Gap



Source: Lightcast program demand gap model.

Figure 3.6: CHC’s Top Certificate Level Programs with a Gap



Source: Lightcast program demand gap model.

The largest certificate level gap, at 4,680 job openings, is for the Cooking & Related Culinary Arts, General program (Figure 3.5). On average, the district has two annual completions, and combined with the other postsecondary educational institutions in the region, there are a total of 65 annual completions. Table 3.1 shows all the award level’s program gaps and surpluses. Results have been split out to show the programs relevant for the two colleges that comprise SBCCD – Crafton Hills College and San Bernardino Valley College. Programs with a significant gap have been highlighted in Table 3.1.

Table 3.1: Gaps and Surpluses for SBCCD’s Certificate Level Programs

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
San Bernardino Valley College						

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
12.0500	Cooking & Related Culinary Arts, General	4,745	65	2	4,680	\$18.17
52.0201	Business Administration & Management, General	4,572	235	2	4,336	\$30.57*
19.0709	Child Care Provider/Assistant	2,131	676	4	1,455	\$18.02
52.0401	Administrative Assistant & Secretarial Science, General	1,416	178	7	1,238	\$20.84
48.0508	Welding Technology/Welder	1,389	460	3	929	\$26.60
52.0302	Accounting Technology/Technician & Bookkeeping	1,024	187	27	837	\$23.53
52.0212	Retail Management	620	7	3	613	\$20.36
47.0604	Automobile/Automotive Mechanics Technology/Technician	674	171	3	504	\$26.62
48.0501	Machine Tool Technology/Machinist	472	12	3	460	\$21.87
47.0605	Diesel Mechanics Technology/Technician	554	95	4	459	\$26.91
15.0613	Manufacturing Engineering Technology/Technician	461	8	<1	453	\$34.26*
12.0504	Restaurant, Culinary, & Catering Management/Manager	463	18	2	445	\$19.32
46.0301	Electrical & Power Transmission Installation/Installer, General	474	69	17	405	\$35.06
47.0303	Industrial Mechanics & Maintenance Technology/Technician	426	34	2	392	\$26.80
13.1210	Early Childhood Education & Teaching	451	63	26	388	\$27.25*
44.0000	Human Services, General	355	49	7	305	\$24.85
52.1501	Real Estate	383	107	6	276	\$30.39*
47.0101	Electrical/Electronics Equipment Installation & Repair Technology/Technician, General	283	10	6	273	\$21.69
47.0603	Autobody/Collision & Repair Technology/Technician	243	24	15	219	\$22.73
15.0501	Heating, Ventilation, Air Conditioning & Refrigeration Engineering Technology/Technician	385	186	9	199	\$24.96
43.0102	Corrections	310	126	1	184	\$44.07*
43.0103	Criminal Justice/Law Enforcement Administration	273	108	6	165	\$39.29*
49.0104	Aviation/Airway Management & Operations	148	1	1	147	\$39.20*
51.0714	Medical Insurance Specialist/Medical Biller	192	76	18	116	\$19.52
25.0301	Library & Archives Assisting	119	6	6	114	\$22.21
51.0805	Pharmacy Technician/Assistant	364	259	11	105	\$21.79
15.0506	Water Quality & Wastewater Treatment Management & Recycling Technology/Technician	116	29	10	87	\$37.70*

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
45.0702	Geographic Information Science & Cartography	81	7	7	74	\$25.97
47.0613	Medium/Heavy Vehicle & Truck Technology/Technician	55	10	10	45	\$27.12
48.0510	Computer Numerically Controlled (CNC) Machinist Technology/CNC Machinist	46	1	1	44	\$20.94
47.0609	Avionics Maintenance Technology/Technician	38	<1	<1	38	\$38.08*
04.0901	Architectural Technology/Technician	50	15	8	35	\$35.54*
19.0505	Foodservice Systems Administration/Management	30	1	<1	29	\$19.86
52.0299	Business Administration, Management & Operations, Other	28	1	1	27	\$29.35*
48.0303	Upholstery/Upholsterer	24	3	<1	21	\$17.27
47.0614	Alternative Fuel Vehicle Technology/Technician	21	2	2	18	\$36.72*
47.0607	Airframe Mechanics & Aircraft Maintenance Technology/Technician	112	94	4	18	\$35.28*
09.0701	Radio & Television	52	37	5	15	\$29.15*
12.0501	Baking & Pastry Arts/Baker/Pastry Chef	12	2	2	10	\$19.74
13.1015	Education/Teaching of Individuals in Early Childhood Special Education Programs	20	12	2	8	\$20.96
52.0701	Entrepreneurship/Entrepreneurial Studies	8	2	2	6	\$45.52*
47.0608	Aircraft Powerplant Technology/Technician	59	53	2	5	\$35.48*
11.0103	Information Technology	56	51	1	5	\$44.02*
11.0101	Computer & Information Sciences, General	9	7	2	2	\$42.95*
11.0701	Computer Science	4	2	2	2	\$52.47*
15.0305	Telecommunications Technology/Technician	2	<1	<1	2	\$33.69*
51.3104	Dietitian Assistant	1	<1	<1	1	\$17.44
11.1002	System, Networking, & LAN/WAN Management/Manager	1	<1	<1	0	\$33.06*
10.0202	Radio & Television Broadcasting Technology/Technician	2	2	2	0	\$26.94
47.0104	Computer Installation & Repair Technology/Technician	3	4	2	(1)	\$24.92
50.0409	Graphic Design	39	48	6	(9)	\$26.42
43.0107	Criminal Justice/Police Science	326	342	260	(16)	\$48.18*
46.0403	Building/Home/Construction Inspection/Inspector	4	22	1	(18)	\$37.95*
11.1006	Computer Support Specialist	68	95	2	(27)	\$24.95
51.1501	Substance Abuse/Addiction Counseling	93	164	21	(71)	\$25.40

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
Crafton Hills College						
52.0201	Business Administration & Management, General	4,572	235	1	4,336	\$30.57*
19.0709	Child Care Provider/Assistant	2,131	676	3	1,455	\$18.02
50.0901	Music, General	78	16	4	62	\$29.74*
16.1601	American Sign Language (ASL)	38	13	8	25	\$28.99*
50.0102	Digital Arts	7	<1	<1	6	\$16.22
11.0103	Information Technology	56	51	2	5	\$44.03*
10.0304	Animation, Interactive Technology, Video Graphics, & Special Effects	10	14	<1	(4)	\$29.01*
43.0203	Fire Science/Fire-fighting	25	138	56	(113)	\$32.78*
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	390	826	200	(436)	\$22.72
	Heavy/Medium Duty Truck Engine & Fuel Injection Technology*	3	N/A	<1	2	\$27.12*

Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11. The Heavy/Medium Duty Truck Engine & Fuel Injection Technology program is a non-credit program, and regional completers are unavailable.

Several occupations mapped to Cooking & Related Culinary Arts, General, such as cooks, restaurant; first-line supervisors of food preparation & serving workers; and cooks, institution & cafeteria (Table 3.2). The median hourly wage for the Cooking & Related Culinary Arts, General program is \$18.17, when weighted by the openings and median hourly wages for each occupation mapped to the program. For context, the California state minimum wage is \$16.00⁹ per hour, and the living wage in the Inland Empire is \$27.11 per hour for a household with two working adults and two children.¹⁰ While this program could be expanded, the district should focus its effort on expanding the higher wage programs identified in the analysis. When considering potential expansion for this program it's important that potential completers be informed of the wages that are currently offered, it is also important to consider the mix of occupations mapped to this program. For instance, completers who move on to work as Food Service Managers and Chefs & Head Cooks have higher wages than that of the majority of occupations. It should be noted that leadership positions in the kitchen and in restaurant management are fewer in number but offer a significant wage premium. So, the district is recommended to prepare students to the extent possible for leadership roles.

⁹ The California minimum wage as of January 1, 2024, is \$16.00 per hour. Source: U.S. Department of Labor.

¹⁰ Living wage calculations provided by Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology. See Appendix 8.

Using Table 3.2, this step-by-step process of evaluating occupational gaps by their job openings, job counts, and median hourly wage rates can be applied to the other SBCCD certificate level programs with a significant gap. In general, occupations with high wages are more noteworthy than those with low wages. Also, if occupational forecasts are not positive, program development may not be a priority at this time. Keep in mind that there could be other sources of skilled workers filling the gaps, such as unemployed workers or workers from outside the Inland Empire.

Table 3.2: Occupations Mapped to SBCCD's Certificate Level Programs with a Significant Gap

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
San Bernardino Valley College						
COOKING & RELATED CULINARY ARTS, GENERAL (CIP CODE 12.0500)						
35-2014	Cooks, Restaurant	16,780	22,578	5,797	2,146	\$17.36
35-1012	First-Line Supervisors of Food Preparation & Serving Workers	15,324	18,922	3,598	1,369	\$17.63
35-2012	Cooks, Institution & Cafeteria	2,334	2,989	655	278	\$19.73
51-3011	Bakers	2,648	3,183	535	271	\$16.64
11-9051	Food Service Managers	5,392	6,212	820	227	\$25.58
51-3021	Butchers & Meat Cutters	2,198	2,472	274	188	\$18.02
35-2015	Cooks, Short Order	1,411	1,599	188	150	\$16.72
35-1011	Chefs & Head Cooks	1,961	2,351	391	115	\$27.07
35-2013	Cooks, Private Household	8	8	(0)	1	\$19.06
BUSINESS ADMINISTRATION & MANAGEMENT, GENERAL (CIP CODE 52.0201)						
43-4051	Customer Service Representatives	19,024	20,420	1,397	1,105	\$18.48
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	839	\$21.57
11-1021	General & Operations Managers	23,115	27,455	4,340	605	\$48.73*
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	14,014	15,269	1,255	479	\$29.86*
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	8,915	10,195	1,280	320	\$27.63*
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	264	\$30.34*
13-1071	Human Resources Specialists	7,283	8,436	1,152	145	\$30.82*
11-9199	Managers, All Other	12,637	13,900	1,263	134	\$36.31*
11-3031	Financial Managers	5,259	6,245	986	112	\$63.18*
11-2022	Sales Managers	7,362	7,994	632	111	\$46.26*
13-1161	Market Research Analysts & Marketing Specialists	5,923	7,158	1,234	84	\$29.81
13-1111	Management Analysts	6,978	8,013	1,035	75	\$40.62*

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	67	\$30.16*
41-4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	1,579	1,671	92	54	\$39.68*
15-1232	Computer User Support Specialists	3,500	3,956	456	43	\$29.30*
11-1011	Chief Executives	3,558	3,675	118	38	\$75.00*
13-2011	Accountants & Auditors	9,618	10,639	1,021	26	\$37.50*
11-2021	Marketing Managers	2,110	2,384	274	19	\$58.41*
13-1082	Project Management Specialists	6,225	7,134	909	19	\$44.72*
11-3121	Human Resources Managers	1,458	1,657	199	18	\$61.40*
11-3021	Computer & Information Systems Managers	2,509	3,023	514	16	\$77.35*
CHILD CARE PROVIDER/ASSISTANT (CIP CODE 19.0709)						
25-9045	Teaching Assistants, Except Postsecondary	16,882	19,263	2,381	995	\$18.53
39-9011	Childcare Workers	10,942	9,996	(945)	892	\$16.17
21-1093	Social & Human Service Assistants	5,646	7,062	1,416	194	\$20.89
21-1021	Child, Family, & School Social Workers	4,377	5,297	921	51	\$29.56*
ADMINISTRATIVE ASSISTANT & SECRETARIAL SCIENCE, GENERAL (CIP CODE 52.0401)						
43-6014	Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	16,898	17,346	448	627	\$22.62
43-9061	Office Clerks, General	25,382	27,232	1,851	464	\$18.93
43-4171	Receptionists & Information Clerks	7,040	8,497	1,457	210	\$16.97
43-6011	Executive Secretaries & Executive Administrative Assistants	3,221	3,032	(189)	51	\$33.46*
43-9022	Word Processors & Typists	936	715	(221)	27	\$23.15
43-4071	File Clerks	1,156	1,136	(20)	19	\$15.51
43-9021	Data Entry Keyers	1,266	1,190	(77)	17	\$19.24
WELDING TECHNOLOGY/WELDER (CIP CODE 48.0508)						
49-9071	Maintenance & Repair Workers, General	15,724	18,564	2,840	438	\$22.93
51-4121	Welders, Cutters, Solderers, & Brazers	4,621	4,934	313	345	\$22.82
47-1011	First-Line Supervisors of Construction Trades & Extraction Workers	9,183	10,184	1,000	235	\$36.50*
47-2152	Plumbers, Pipefitters, & Steamfitters	5,299	6,070	771	185	\$27.74*
47-2221	Structural Iron & Steel Workers	1,203	1,281	78	82	\$29.64*
47-2171	Reinforcing Iron & Rebar Workers	971	1,035	64	52	\$27.61*
47-2211	Sheet Metal Workers	1,287	1,441	154	38	\$30.24*
51-4122	Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders	204	201	(4)	14	\$21.89
ACCOUNTING TECHNOLOGY/TECHNICIAN & BOOKKEEPING (CIP CODE 52.0302)						
43-3031	Bookkeeping, Accounting, & Auditing Clerks	17,455	18,241	786	883	\$22.90

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
43-3051	Payroll & Timekeeping Clerks	2,352	2,242	(110)	82	\$26.94
13-2082	Tax Preparers	1,305	1,295	(10)	34	\$22.75
13-2011	Accountants & Auditors	9,618	10,639	1,021	21	\$37.50*
43-4011	Brokerage Clerks	71	77	7	4	\$28.10*
43-9111	Statistical Assistants	24	26	2	1	\$24.87
RETAIL MANAGEMENT (CIP CODE 52.0212)						
53-7065	Stockers & Order Fillers	53,065	63,928	10,863	472	\$19.01
33-9099	Protective Service Workers, All Other	4,377	5,031	654	77	\$17.82
13-1028	Buyers & Purchasing Agents	3,786	3,949	164	25	\$30.51*
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	25	\$21.57
11-1021	General & Operations Managers	23,115	27,455	4,340	18	\$48.73*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	2	\$30.16*
13-1082	Project Management Specialists	6,225	7,134	909	1	\$44.72*
AUTOMOBILE/AUTOMOTIVE MECHANICS TECHNOLOGY/TECHNICIAN (CIP CODE 47.0604)						
49-3023	Automotive Service Technicians & Mechanics	10,925	12,386	1,461	432	\$26.14
49-3021	Automotive Body & Related Repairers	1,886	2,281	395	129	\$27.72*
49-1011	First-Line Supervisors of Mechanics, Installers, & Repairers	6,123	7,152	1,029	52	\$36.85*
49-3022	Automotive Glass Installers & Repairers	697	807	110	46	\$14.70
53-6051	Transportation Inspectors	232	281	49	7	\$30.10*
49-2093	Electrical & Electronics Installers & Repairers, Transportation Equipment	108	124	16	6	\$39.57*
49-2096	Electronic Equipment Installers & Repairers, Motor Vehicles	51	52	1	2	\$17.71
MACHINE TOOL TECHNOLOGY/MACHINIST (CIP CODE 48.0501)						
51-4031	Cutting, Punching, & Press Machine Setters, Operators, & Tenders, Metal & Plastic	1,227	1,211	(17)	78	\$19.99
51-4021	Extruding & Drawing Machine Setters, Operators, & Tenders, Metal & Plastic	785	820	34	56	\$17.97
51-4041	Machinists	3,091	3,328	237	56	\$22.79
49-9041	Industrial Machinery Mechanics	3,480	4,203	723	52	\$29.82*
51-9161	Computer Numerically Controlled Tool Operators	1,175	1,186	11	47	\$22.08
51-4033	Grinding, Lapping, Polishing, & Buffing Machine Tool Setters, Operators, & Tenders, Metal & Plastic	967	920	(47)	42	\$17.32
51-4034	Lathe & Turning Machine Tool Setters, Operators, & Tenders, Metal & Plastic	404	396	(8)	35	\$23.08
51-4023	Rolling Machine Setters, Operators, & Tenders, Metal & Plastic	398	353	(45)	25	\$27.48*
51-4081	Multiple Machine Tool Setters, Operators, & Tenders, Metal & Plastic	506	557	51	25	\$17.50
51-4199	Metal Workers & Plastic Workers, All Other	343	341	(2)	16	\$18.43

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
51-4035	Milling & Planing Machine Setters, Operators, & Tenders, Metal & Plastic	180	166	(14)	15	\$21.09
49-9043	Maintenance Workers, Machinery	423	508	86	10	\$25.98
51-4191	Heat Treating Equipment Setters, Operators, & Tenders, Metal & Plastic	108	108	(1)	5	\$22.73
49-9044	Millwrights	199	231	32	4	\$28.18
51-4032	Drilling & Boring Machine Tool Setters, Operators, & Tenders, Metal & Plastic	44	43	(1)	4	\$19.71
51-4022	Forging Machine Setters, Operators, & Tenders, Metal & Plastic	27	26	(1)	2	\$26.16
51-4192	Layout Workers, Metal & Plastic	30	32	2	1	\$25.61

Crafton Hills College

BUSINESS ADMINISTRATION & MANAGEMENT, GENERAL (CIP CODE 52.0201)

43-4051	Customer Service Representatives	19,024	20,420	1,397	1,105	\$18.48
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	839	\$21.57
11-1021	General & Operations Managers	23,115	27,455	4,340	605	\$48.73*
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	14,014	15,269	1,255	479	\$29.86
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	8,915	10,195	1,280	320	\$27.63
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	264	\$30.34*
13-1071	Human Resources Specialists	7,283	8,436	1,152	145	\$30.82*
11-9199	Managers, All Other	12,637	13,900	1,263	134	\$36.31*
11-3031	Financial Managers	5,259	6,245	986	112	\$63.18*
11-2022	Sales Managers	7,362	7,994	632	111	\$46.26*
13-1161	Market Research Analysts & Marketing Specialists	5,923	7,158	1,234	84	\$29.81
13-1111	Management Analysts	6,978	8,013	1,035	75	\$40.62*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	67	\$30.16*
41-4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	1,579	1,671	92	54	\$39.68*
15-1232	Computer User Support Specialists	3,500	3,956	456	43	\$29.30
11-1011	Chief Executives	3,558	3,675	118	38	\$75.00*
13-2011	Accountants & Auditors	9,618	10,639	1,021	26	\$37.50*
11-2021	Marketing Managers	2,110	2,384	274	19	\$58.41*
13-1082	Project Management Specialists	6,225	7,134	909	19	\$44.72*
11-3121	Human Resources Managers	1,458	1,657	199	18	\$61.40*
11-3021	Computer & Information Systems Managers	2,509	3,023	514	16	\$77.35*

CHILD CARE PROVIDER/ASSISTANT (CIP CODE 19.0709)

25-9045	Teaching Assistants, Except Postsecondary	16,882	19,263	2,381	995	\$18.53
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SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
39-9011	Childcare Workers	10,942	9,996	(945)	892	\$16.17
21-1093	Social & Human Service Assistants	5,646	7,062	1,416	194	\$20.89
21-1021	Child, Family, & School Social Workers	4,377	5,297	921	51	\$29.56*

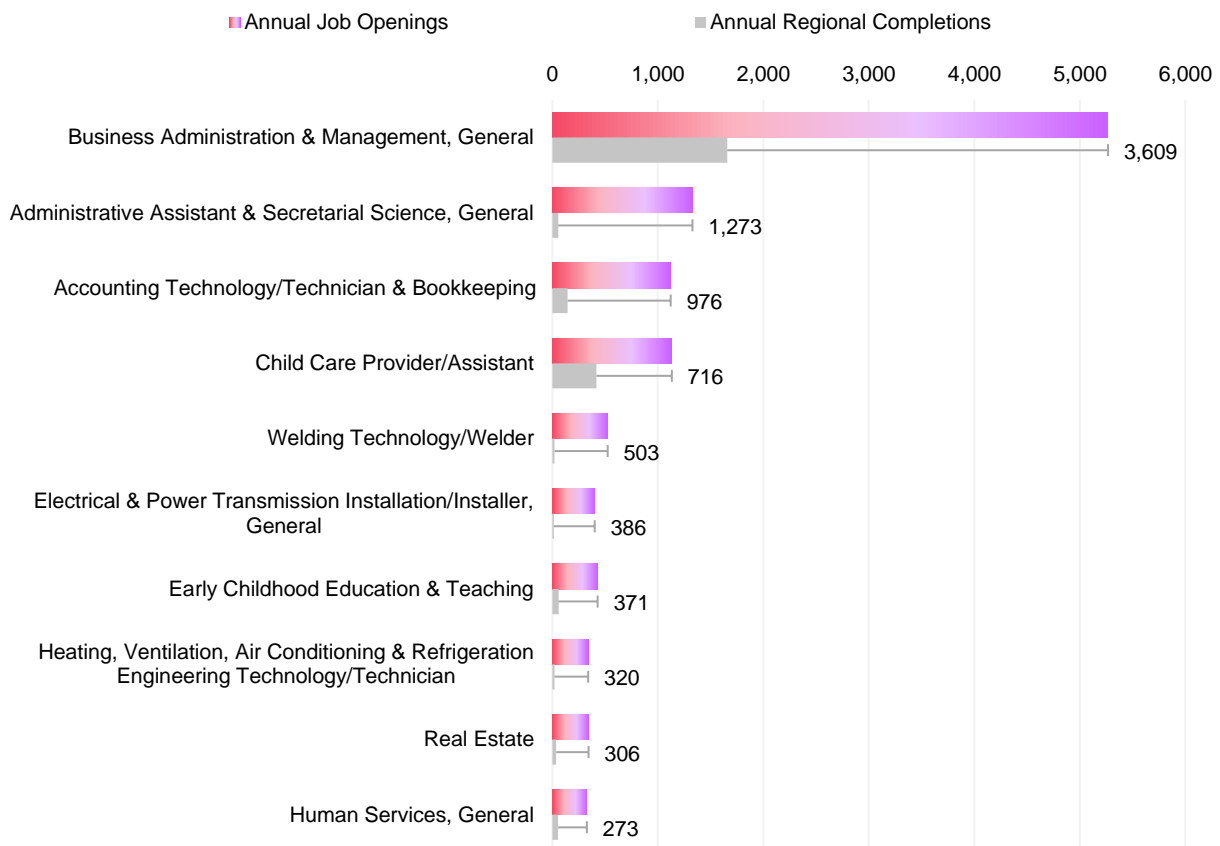
*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11
 Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

ASSOCIATE DEGREE LEVEL ANALYSIS

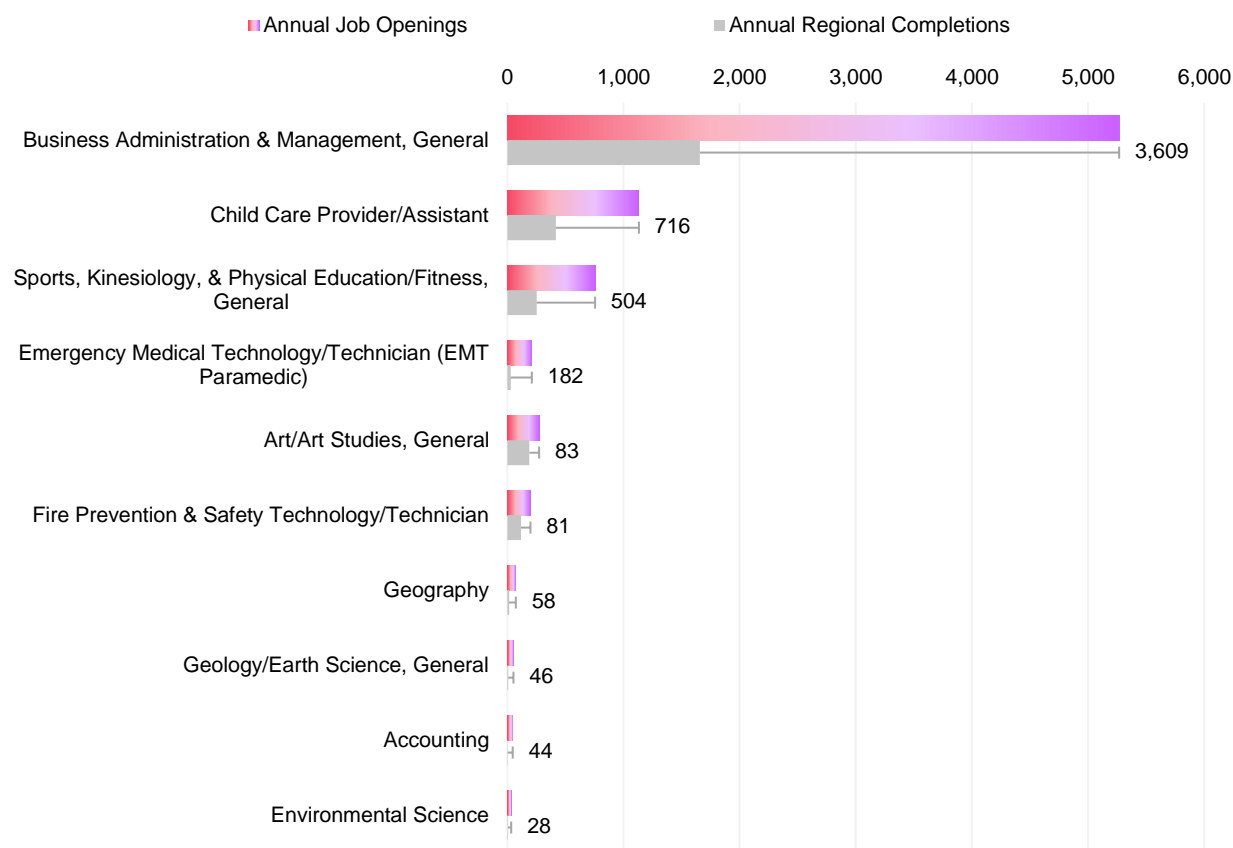
SBCCD offers 84 programs in which students receive an Associate in Applied Science (AAS), Art (AA), Fine Arts (AFA), or Science (AS) degrees in one of many subject areas, when the programs are classified by their six-digit CIP codes. Like the previous section, job openings consider this award level and one below – an associate degree and some college education in this section. An occupation’s job openings are weighted by the number of other programs mapped to the occupation and scaled according to a program’s completions.

Figure 3.7: SBVC’s Top 10 Associate Degree Level Programs with a Gap



Source: Lightcast program demand gap model.

Figure 3.8: CHC’s Top 10 Associate Degree Level Programs with a Gap



Source: Lightcast program demand gap model.

As shown in Figure 3.7 & 3.8, six programs have a significant gap above the 500-openings level of significance. The Business Administration & Management, General program has the largest, followed by the Administrative Assistant & Secretarial Science, General and Accounting Technology/Technician & Bookkeeping programs. As shown in Table 3.3, the Business Administration & Management, General program has 5,267 average annual job openings, considering the region’s labor market. On average, the district has 133 annual completions, and combined with the other postsecondary educational institutions in the region, there are a total of 1,658 annual completions. There are two programs with a significant surplus of program completions above the 500-openings level of significance. Programs with a significant gap or surplus have been highlighted in Table 3.3. Results have been split out to show the programs relevant for the two colleges that comprise SBCCD.

Table 3.3: Gaps and Surpluses for SBCCD's Associate Degree Level Programs

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
San Bernardino Valley College						
52.0201	Business Administration & Management, General	5,267	1,658	133	3,609	\$31.90*
52.0401	Administrative Assistant & Secretarial Science, General	1,328	55	8	1,273	\$20.84
52.0302	Accounting Technology/Technician & Bookkeeping	1,121	145	41	976	\$23.38
19.0709	Child Care Provider/Assistant	1,132	416	25	716	\$17.65
48.0508	Welding Technology/Welder	524	21	2	503	\$25.83
46.0301	Electrical & Power Transmission Installation/Installer, General	401	15	5	386	\$33.66
13.1210	Early Childhood Education & Teaching	429	58	34	371	\$25.97
15.0501	Heating, Ventilation, Air Conditioning & Refrigeration Engineering Technology/Technician	339	19	3	320	\$24.85
52.1501	Real Estate	343	36	3	306	\$30.40*
44.0000	Human Services, General	327	54	33	273	\$20.77
48.0501	Machine Tool Technology/Machinist	274	3	1	271	\$22.04
12.0504	Restaurant, Culinary, & Catering Management/Manager	285	15	2	270	\$19.69
15.0613	Manufacturing Engineering Technology/Technician	260	3	1	258	\$29.89*
47.0604	Automobile/Automotive Mechanics Technology/Technician	708	455	4	253	\$29.41
47.0101	Electrical/Electronics Equipment Installation & Repair Technology/Technician, General	258	12	10	246	\$23.46
51.3801	Registered Nursing/Registered Nurse	789	567	89	222	\$58.69
52.0901	Hospitality Administration/Management, General	220	12	1	208	\$21.42
49.0104	Aviation/Airway Management & Operations	175	3	3	172	\$38.91*
47.0605	Diesel Mechanics Technology/Technician	150	8	3	142	\$27.33*
51.0805	Pharmacy Technician/Assistant	147	24	14	123	\$21.38
47.0603	Autobody/Collision & Repair Technology/Technician	95	5	3	90	\$21.89
50.0701	Art/Art Studies, General	274	190	15	84	\$19.90
45.0701	Geography	73	14	3	59	\$32.80*
13.1015	Education/Teaching of Individuals in Early Childhood Special Education Programs	249	198	3	51	\$19.53
40.0601	Geology/Earth Science, General	52	6	<1	46	\$24.78
04.0901	Architectural Technology/Technician	53	8	2	46	\$35.80*

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
15.0506	Water Quality & Wastewater Treatment Management & Recycling Technology/Technician	76	35	17	41	\$37.43*
47.0609	Avionics Maintenance Technology/Technician	42	1	1	41	\$38.07*
47.0613	Medium/Heavy Vehicle & Truck Technology/Technician	35	2	2	33	\$27.83*
03.0104	Environmental Science	33	5	1	28	\$40.14*
47.0607	Airframe Mechanics & Aircraft Maintenance Technology/Technician	141	114	2	27	\$35.79*
47.0104	Computer Installation & Repair Technology/Technician	33	10	4	23	\$24.11
19.0504	Human Nutrition	17	1	1	16	\$18.90
16.0905	Spanish Language & Literature	103	88	8	15	\$37.01*
11.0701	Computer Science	133	118	9	15	\$44.35*
50.0501	Drama & Dramatics/Theatre Arts, General	65	51	3	15	\$25.65
11.0103	Information Technology	201	187	7	14	\$40.18*
15.0305	Telecommunications Technology/Technician	13	1	1	12	\$32.33
12.0501	Baking & Pastry Arts/Baker/Pastry Chef	13	2	2	10	\$20.45
50.0602	Cinematography & Film/Video Production	9	3	3	6	\$16.06
46.0403	Building/Home/Construction Inspection/Inspector	14	9	1	5	\$37.99*
13.0414	Early Childhood Program Administration	0	<1	<1	(0)	\$58.29*
40.0201	Astronomy	0	<1	<1	(0)	\$48.22*
10.0202	Radio & Television Broadcasting Technology/Technician	0	<1	<1	(0)	\$26.55
40.0501	Chemistry, General	46	50	8	(5)	\$31.61*
25.0301	Library & Archives Assisting	3	13	13	(10)	\$22.21
51.1502	Psychiatric/Mental Health Services Technician	52	70	70	(18)	\$31.46*
50.0901	Music, General	36	55	5	(19)	\$27.16*
43.0103	Criminal Justice/Law Enforcement Administration	468	494	15	(27)	\$43.58*
50.0409	Graphic Design	14	41	13	(27)	\$28.15*
38.0101	Philosophy	5	35	2	(31)	\$52.39*
26.0101	Biology/Biological Sciences, General	76	110	9	(34)	\$23.60
31.0505	Exercise Science & Kinesiology	110	157	16	(48)	\$23.56
09.0701	Radio & Television	34	85	14	(51)	\$27.60*
45.0601	Economics, General	9	81	2	(71)	\$32.67*
45.0201	Anthropology, General	5	76	6	(72)	\$35.37*

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
43.0107	Criminal Justice/Police Science	182	266	51	(84)	\$46.72*
40.0801	Physics, General	2	91	7	(89)	\$48.13*
45.1001	Political Science & Government, General	31	147	9	(116)	\$34.16*
23.0101	English Language & Literature, General	100	248	12	(148)	\$25.86
54.0101	History, General	21	248	9	(228)	\$38.76*
27.0101	Mathematics, General	23	292	15	(270)	\$45.71*
09.0101	Speech Communication & Rhetoric	33	328	14	(295)	\$32.37*
45.1101	Sociology, General	90	513	45	(423)	\$34.90*
42.0101	Psychology, General	644	1,160	101	(516)	\$27.96*
30.0101	Biological & Physical Sciences	1,330	2,908	87	(1,578)	\$23.36
Crafton Hills College						
52.0401	Administrative Assistant & Secretarial Science, General	179	7	7	172	\$16.96
13.1210	Early Childhood Education & Teaching	136	24	24	112	\$14.58
52.0101	Business/Commerce, General	88	22	19	66	\$37.34*
52.0301	Accounting	70	17	17	54	\$23.17
01.0308	Agroecology & Sustainable Agriculture	51	7	7	44	\$17.03
01.0699	Applied Horticulture/Horticultural Business Services, Other	46	3	3	42	\$15.51
47.0201	Heating, Air Conditioning, Ventilation & Refrigeration Maintenance Technology/Technician	43	10	10	32	\$23.47
01.0901	Animal Sciences, General	39	10	10	29	\$14.86
01.0102	Agribusiness/Agricultural Business Operations	44	21	21	23	\$17.82
47.0603	Autobody/Collision & Repair Technology/Technician	29	11	11	18	\$22.41
51.0707	Health Information/Medical Records Technology/Technician	24	7	7	17	\$19.45
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	23	7	7	16	\$17.43
01.1102	Agromony & Crop Science	28	14	14	14	\$16.97
46.0302	Electrician	28	16	16	12	\$24.38
01.0104	Farm/Farm & Ranch Management	13	6	6	7	\$17.83
11.0101	Computer & Information Sciences, General	18	16	16	2	\$35.39*
15.1701	Energy Systems Technology/Technician	7	5	5	2	\$33.28*
51.3801	Registered Nursing/Registered Nurse	39	38	38	1	\$34.11*
43.0107	Criminal Justice/Police Science	21	22	22	(1)	\$28.40*

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
51.0806	Physical Therapy Assistant	9	11	11	(2)	\$23.18
47.0604	Automobile/Automotive Mechanics Technology/Technician	9	13	13	(4)	\$24.16
47.0605	Diesel Mechanics Technology/Technician	20	26	26	(5)	\$20.65
15.0403	Electromechanical/Electromechanical Engineering Technology/Technician	8	14	14	(6)	\$23.42
01.8301	Veterinary/Animal Health Technology/Technician & Veterinary Assistant	11	19	19	(8)	\$14.40
50.0409	Graphic Design	3	11	11	(8)	\$19.99
10.0299	Audiovisual Communications Technologies/Technicians, Other	1	11	11	(9)	\$21.51
15.1303	Architectural Drafting & Architectural CAD/CADD	1	12	12	(11)	\$23.13
46.0499	Building/Construction Finishing, Management, & Inspection, Other	5	21	20	(15)	\$27.20*
46.0303	Lineworker	14	36	36	(22)	\$28.30*

*: An asterisk indicates that the wage for a particular program is greater than the living wage for the region which is \$27.11. Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

Several occupations mapped to Business Administration & Management, General such as customer service representatives; general & operations managers; and first-line supervisors of retail sales workers (Table 3.4). The median hourly wage for this program is \$31.90, when weighted by the openings and median hourly wages for each occupation mapped to the program. For context, the California state minimum wage is \$16.00¹¹ per hour, and the living wage in the Inland Empire is \$27.11 per hour for a household with two working adults and two children.¹² This program is recommended for expansion because of the large gap and high median hourly wage. Furthermore, Business Administration programs can lead to leadership positions in a variety of industries, therefore it is important for the district to consider the industry mix of the Inland Empire and ensure the program curriculum is optimally training students to be competitive in the local labor market.

While the gaps are important to keep in mind for building or expanding programs, the surpluses are equally important to ensure the district is training students with skills the regional workforce requires. There are two associate degree programs at SBCCD with a significant surplus. Biological & Physical Sciences has the largest, with a surplus of 1,578 and Psychology, General follows with a surplus of 516. In addition to filling occupations mapped to these programs, completers also gain a range of marketable skills which prepare them to fill a wide range of occupations.

¹¹ The California minimum wage as of January 1, 2024, is \$16.00 per hour. Source: U.S. Department of Labor.

¹² Living wage calculations provided by Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology. See Appendix 8.

Using Table 3.4, this step-by-step process of evaluating occupational gaps by their job openings, job counts, and median hourly wage rates can be applied to the other SBCCD associate degree level programs with a significant gap. In general, occupations with high wages should be considered more noteworthy than those with low wages. If an occupation's job projections are not positive, then it may not be worth further consideration, in terms of its mapped programs. Also, there could be other sources of skilled workers filling the gaps, such as unemployed workers or workers from outside the region.

Table 3.4: Occupations Mapped to SBCCD's Associate Degree Level Programs with a Significant Gap

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
San Bernardino Valley College						
BUSINESS ADMINISTRATION & MANAGEMENT, GENERAL (CIP CODE 52.0201)						
43-4051	Customer Service Representatives	19,024	20,420	1,397	1,158	\$18.48
11-1021	General & Operations Managers	23,115	27,455	4,340	746	\$48.73*
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	657	\$21.57
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	641	\$30.34*
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	14,014	15,269	1,255	444	\$29.86*
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	8,915	10,195	1,280	292	\$27.63*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	220	\$30.16*
11-2022	Sales Managers	7,362	7,994	632	153	\$46.26*
11-3031	Financial Managers	5,259	6,245	986	120	\$63.18*
13-1071	Human Resources Specialists	7,283	8,436	1,152	112	\$30.82*
13-1161	Market Research Analysts & Marketing Specialists	5,923	7,158	1,234	102	\$29.81*
13-1111	Management Analysts	6,978	8,013	1,035	101	\$40.62*
15-1232	Computer User Support Specialists	3,500	3,956	456	97	\$29.30*
13-2011	Accountants & Auditors	9,618	10,639	1,021	90	\$37.50*
11-9199	Managers, All Other	12,637	13,900	1,263	88	\$36.31*
13-1082	Project Management Specialists	6,225	7,134	909	74	\$44.72*
41-4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	1,579	1,671	92	48	\$39.68*
11-1011	Chief Executives	3,558	3,675	118	42	\$75.00*
11-3021	Computer & Information Systems Managers	2,509	3,023	514	40	\$77.35*
11-2021	Marketing Managers	2,110	2,384	274	27	\$58.41*
11-3121	Human Resources Managers	1,458	1,657	199	17	\$61.40*
ADMINISTRATIVE ASSISTANT & SECRETARIAL SCIENCE, GENERAL (CIP CODE 52.0401)						

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
43-9061	Office Clerks, General	25,382	27,232	1,851	543	\$18.93
43-6014	Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	16,898	17,346	448	474	\$22.62
43-4171	Receptionists & Information Clerks	7,040	8,497	1,457	156	\$16.97
43-6011	Executive Secretaries & Executive Administrative Assistants	3,221	3,032	(189)	69	\$33.46*
43-9022	Word Processors & Typists	936	715	(221)	43	\$23.15
43-4071	File Clerks	1,156	1,136	(20)	30	\$15.51
43-9021	Data Entry Keyers	1,266	1,190	(77)	12	\$19.24
ACCOUNTING TECHNOLOGY/TECHNICIAN & BOOKKEEPING (CIP CODE 52.0302)						
43-3031	Bookkeeping, Accounting, & Auditing Clerks	17,455	18,241	786	963	\$22.90
43-3051	Payroll & Timekeeping Clerks	2,352	2,242	(110)	101	\$26.94
13-2082	Tax Preparers	1,305	1,295	(10)	45	\$22.75
13-2011	Accountants & Auditors	9,618	10,639	1,021	8	\$37.50*
43-4011	Brokerage Clerks	71	77	7	4	\$28.10*
43-9111	Statistical Assistants	24	26	2	0	\$24.87
CHILD CARE PROVIDER/ASSISTANT (CIP CODE 19.0709)						
39-9011	Childcare Workers	10,942	9,996	(945)	556	\$16.17
25-9045	Teaching Assistants, Except Postsecondary	16,882	19,263	2,381	499	\$18.53
21-1093	Social & Human Service Assistants	5,646	7,062	1,416	61	\$20.89
21-1021	Child, Family, & School Social Workers	4,377	5,297	921	16	\$29.56
WELDING TECHNOLOGY/WELDER (CIP CODE 48.0508)						
51-4121	Welders, Cutters, Solderers, & Brazers	4,621	4,934	313	155	\$22.82
49-9071	Maintenance & Repair Workers, General	15,724	18,564	2,840	151	\$22.93
47-2152	Plumbers, Pipefitters, & Steamfitters	5,299	6,070	771	97	\$27.74*
47-1011	First-Line Supervisors of Construction Trades & Extraction Workers	9,183	10,184	1,000	48	\$36.50*
47-2221	Structural Iron & Steel Workers	1,203	1,281	78	36	\$29.64*
47-2171	Reinforcing Iron & Rebar Workers	971	1,035	64	16	\$27.61*
47-2211	Sheet Metal Workers	1,287	1,441	154	15	\$30.24*
51-4122	Welding, Soldering, & Brazing Machine Setters, Operators, & Tenders	204	201	(4)	6	\$21.89
Crafton Hills College						
BUSINESS ADMINISTRATION & MANAGEMENT, GENERAL (CIP CODE 52.0201)						
43-4051	Customer Service Representatives	19,024	20,420	1,397	1,158	\$18.48
11-1021	General & Operations Managers	23,115	27,455	4,340	746	\$48.73*
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	657	\$21.57

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	641	\$30.34*
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	14,014	15,269	1,255	444	\$29.86*
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	8,915	10,195	1,280	292	\$27.63*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	220	\$30.16*
11-2022	Sales Managers	7,362	7,994	632	153	\$46.26*
11-3031	Financial Managers	5,259	6,245	986	120	\$63.18*
13-1071	Human Resources Specialists	7,283	8,436	1,152	112	\$30.82*
13-1161	Market Research Analysts & Marketing Specialists	5,923	7,158	1,234	102	\$29.81*
13-1111	Management Analysts	6,978	8,013	1,035	101	\$40.62*
15-1232	Computer User Support Specialists	3,500	3,956	456	97	\$29.30*
13-2011	Accountants & Auditors	9,618	10,639	1,021	90	\$37.50*
11-9199	Managers, All Other	12,637	13,900	1,263	88	\$36.31*
13-1082	Project Management Specialists	6,225	7,134	909	74	\$44.72*
41-4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	1,579	1,671	92	48	\$39.68*
11-1011	Chief Executives	3,558	3,675	118	42	\$75.00*
11-3021	Computer & Information Systems Managers	2,509	3,023	514	40	\$77.35*
11-2021	Marketing Managers	2,110	2,384	274	27	\$58.41*
11-3121	Human Resources Managers	1,458	1,657	199	17	\$61.40*
CHILD CARE PROVIDER/ASSISTANT (CIP CODE 19.0709)						
39-9011	Childcare Workers	10,942	9,996	(945)	556	\$16.17
25-9045	Teaching Assistants, Except Postsecondary	16,882	19,263	2,381	499	\$18.53
21-1093	Social & Human Service Assistants	5,646	7,062	1,416	61	\$20.89
21-1021	Child, Family, & School Social Workers	4,377	5,297	921	16	\$29.56*
SPORTS, KINESIOLOGY, & PHYSICAL EDUCATION/FITNESS, GENERAL (CIP CODE 31.0501)						
39-9032	Recreation Workers	3,868	4,638	770	343	\$15.51
39-9031	Exercise Trainers & Group Fitness Instructors	4,293	5,309	1,017	166	\$22.67
27-2022	Coaches & Scouts	2,412	2,790	378	76	\$20.15
31-2022	Physical Therapist Aides	756	888	132	60	\$16.32
11-9151	Social & Community Service Managers	2,252	2,881	630	22	\$33.17*
27-2023	Umpires, Referees, & Other Sports Officials	179	164	(15)	16	\$17.26
21-1091	Health Education Specialists	585	713	128	16	\$28.32*
21-1094	Community Health Workers	657	848	191	15	\$21.72

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
29-2051	Dietetic Technicians	307	362	55	13	\$17.44
29-1031	Dietitians & Nutritionists	755	941	186	6	\$38.35*
11-9039	Education Administrators, All Other	917	1,019	102	5	\$45.61*
25-2022	Middle School Teachers, Except Special & Career/Technical Education	3,144	3,957	814	4	\$48.88*
27-2021	Athletes & Sports Competitors	124	94	(31)	3	\$32.79*
29-9091	Athletic Trainers	264	340	76	3	\$32.67*
25-2059	Special Education Teachers, All Other	526	618	92	3	\$42.96*
25-2031	Secondary School Teachers, Except Special & Career/Technical Education	11,390	13,187	1,797	2	\$50.71*
29-1125	Recreational Therapists	172	206	33	2	\$39.00*
29-1128	Exercise Physiologists	120	141	21	0	\$31.89*
29-1229	Physicians, All Other	3,342	3,781	440	0	\$34.69*

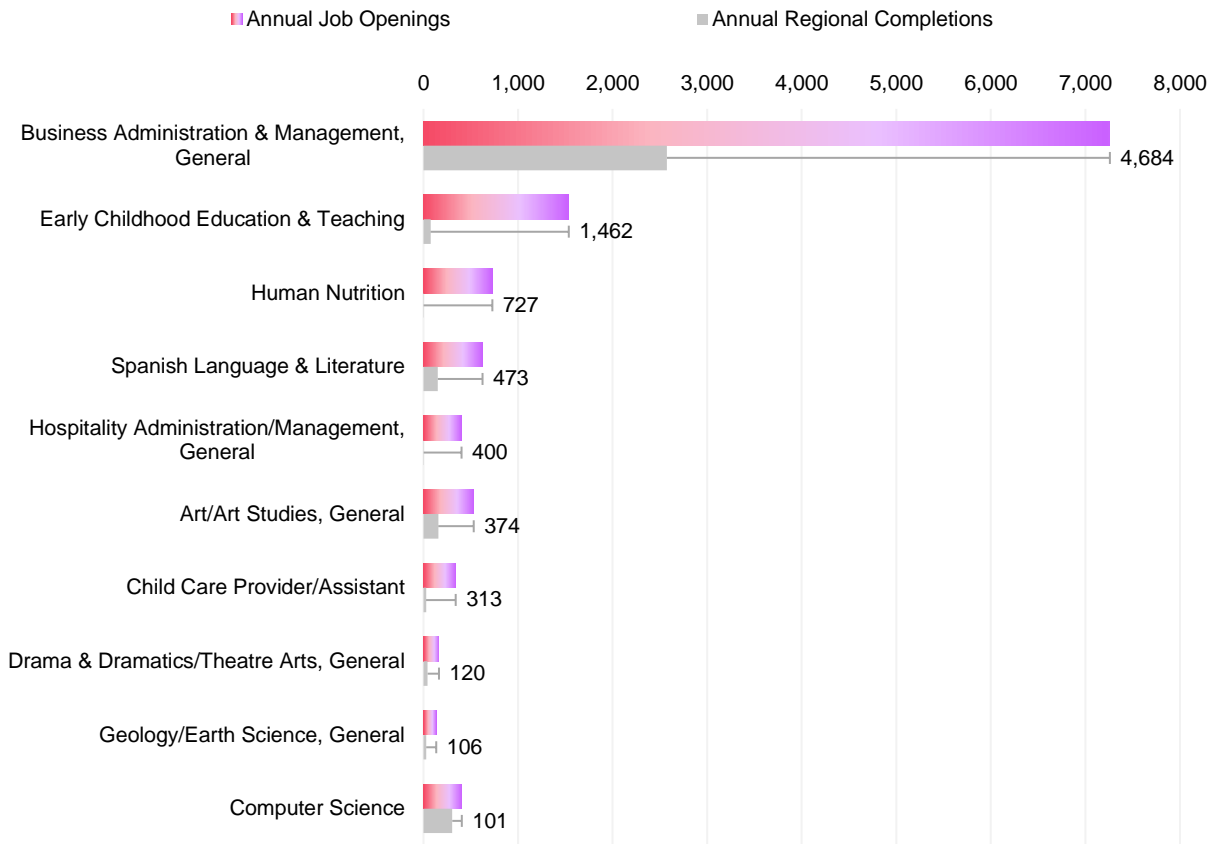
*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11
Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

TRANSFER-TRACK DEGREE LEVEL ANALYSIS

The analysis in this section again evaluates SBCCD's associate degree level programs but at the bachelor's degree level. The programs are referred to as transfer-track degree level programs, and a program completer could readily transfer into a similar bachelor's degree level program. At SBCCD, there are 35 such transfer-track degree level programs, when the programs are classified by their six-digit CIP codes. SBCCD is one of many postsecondary educational institutions in the region, and several other institutions offer bachelor's degree level programs. Job openings at this award level consider someone with a bachelor's degree or associate degree level of education. An occupation's job openings are weighted by the number of other programs mapped to the occupation and scaled according to a program's completions.

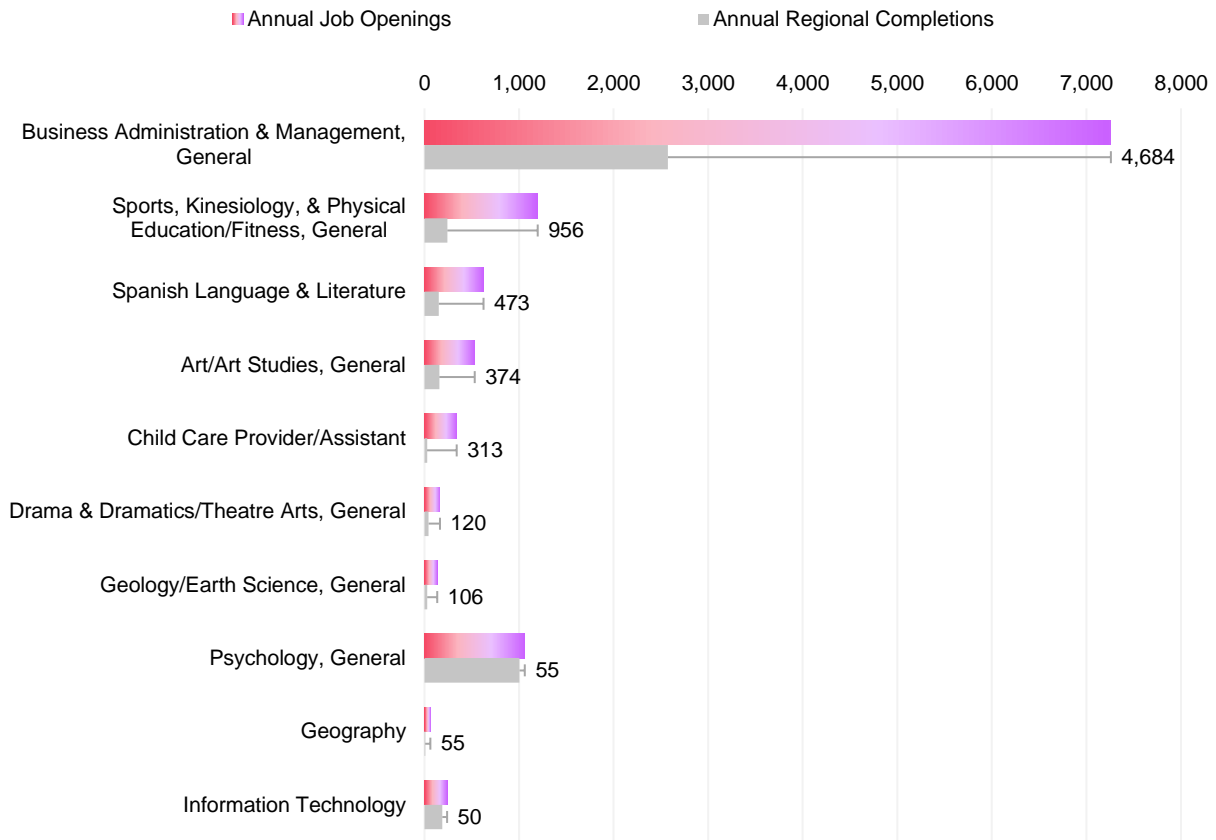
Figure 3.9: SBVC's Top Ten Transfer-Track Degree Level Programs with a Gap



Programs award completers with an associate degree, but the demand for jobs considers a bachelor's degree level of education.

Source: Lightcast program demand gap model.

Figure 3.10: CHC's Top Ten Transfer-Track Degree Level Programs with a Gap



Programs award completers with an associate degree, but the demand for jobs considers a bachelor's degree level of education.

Source: Lightcast program demand gap model.

Figure 3.9 & 3.10 shows the programs with a significant gap. The Business Administration & Management, General program has the largest, followed by the Early Childhood Education & Teaching and Human Nutrition programs. As shown in Table 3.5, there are 7,259 average annual job openings in the region for occupations related to the Business Administration & Management, General program. On average, the college graduates 107 annual completers, and combined with the other postsecondary educational institutions in the region, there are a total of 2,575 annual completers. Programs with a significant gap or surplus have been highlighted in Table 3.5. Similar to the previous two sections, results have been split out to show the programs relevant for the two colleges that comprise SBCCD.

Table 3.5: Gaps and Surpluses for SBCCD's Transfer-Track Degree Level Programs

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
San Bernardino Valley College						
52.0201	Business Administration & Management, General	7,259	2,575	107	4,684	\$34.85*
13.1210	Early Childhood Education & Teaching	1,537	75	3	1,462	\$26.10
19.0504	Human Nutrition	728	1	1	727	\$18.48
16.0905	Spanish Language & Literature	624	151	8	473	\$44.42*
52.0901	Hospitality Administration/Management, General	402	2	2	400	\$23.00
50.0701	Art/Art Studies, General	531	157	9	374	\$20.73
19.0709	Child Care Provider/Assistant	341	27	25	313	\$18.00
50.0501	Drama & Dramatics/Theatre Arts, General	164	44	3	120	\$25.03
40.0601	Geology/Earth Science, General	135	29	<1	106	\$31.24*
11.0701	Computer Science	405	304	6	101	\$47.57*
31.0505	Exercise Science & Kinesiology	220	162	13	59	\$23.54
42.0101	Psychology, General	1,060	1,005	101	55	\$28.97*
45.0701	Geography	62	7	1	55	\$34.60*
43.0103	Criminal Justice/Law Enforcement Administration	209	157	11	53	\$45.59*
50.0901	Music, General	67	42	3	25	\$28.54
09.0701	Radio & Television	19	11	10	7	\$27.07
43.0107	Criminal Justice/Police Science	52	51	51	1	\$48.13*
40.0501	Chemistry, General	119	132	2	(12)	\$36.89*
23.0101	English Language & Literature, General	303	357	12	(55)	\$33.55*
38.0101	Philosophy	13	72	2	(59)	\$51.54*
40.0801	Physics, General	20	79	6	(59)	\$52.20*
45.0601	Economics, General	24	106	3	(82)	\$32.60*
45.0201	Anthropology, General	11	143	6	(131)	\$34.35*
09.0101	Speech Communication & Rhetoric	100	243	14	(143)	\$33.68*
54.0101	History, General	88	245	9	(157)	\$46.08*
27.0101	Mathematics, General	140	328	15	(188)	\$48.51*
45.1001	Political Science & Government, General	110	348	9	(238)	\$33.81*
26.0101	Biology/Biological Sciences, General	439	817	5	(378)	\$39.85*
45.1101	Sociology, General	148	793	45	(645)	\$35.92*
Crafton Hills College						

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	SBCCD		
52.0201	Business Administration & Management, General	7,259	2,575	84	4,684	\$34.85*
31.0501	Sports, Kinesiology, & Physical Education/Fitness, General	1,197	242	14	956	\$22.30
16.0905	Spanish Language & Literature	624	151	5	473	\$44.42*
50.0701	Art/Art Studies, General	531	157	8	374	\$20.73
19.0709	Child Care Provider/Assistant	341	27	2	313	\$18.00
50.0501	Drama & Dramatics/Theatre Arts, General	164	44	5	120	\$25.03
40.0601	Geology/Earth Science, General	135	29	1	106	\$31.24*
42.0101	Psychology, General	1,060	1,005	60	55	\$28.97*
45.0701	Geography	62	7	<1	55	\$34.60*
11.0103	Information Technology	239	189	13	50	\$44.49*
50.0901	Music, General	67	42	2	25	\$28.54*
13.0101	Education, General	11	<1	<1	10	\$27.74*
51.2201	Public Health, General	31	43	2	(12)	\$40.93*
40.0501	Chemistry, General	119	132	8	(12)	\$36.89*
51.3101	Dietetics/Dietitian	2	14	3	(12)	\$33.64*
50.0703	Art History, Criticism & Conservation	7	23	3	(16)	\$19.07
23.0101	English Language & Literature, General	303	357	16	(55)	\$33.55*
38.0101	Philosophy	13	72	3	(59)	\$51.54*
40.0801	Physics, General	20	79	11	(59)	\$52.20*
45.0601	Economics, General	24	106	6	(82)	\$32.60*
45.0201	Anthropology, General	11	143	4	(131)	\$34.35*
09.0101	Speech Communication & Rhetoric	100	243	12	(143)	\$33.68*
54.0101	History, General	88	245	24	(157)	\$46.08*
27.0101	Mathematics, General	140	328	20	(188)	\$48.51*
45.1001	Political Science & Government, General	110	348	7	(238)	\$33.81*
26.0101	Biology/Biological Sciences, General	439	817	15	(378)	\$39.85*
45.1101	Sociology, General	148	793	35	(645)	\$35.92*

*: An asterisk indicates that the wage for a particular program is greater than the living wage for the region which is \$27.11 Programs award completers with an associate degree, but the demand for jobs considers a bachelor's degree level of education.

Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

Since Business Administration & Management, General was analyzed in the previous section, we will focus on Early Childhood Education & Teaching here. This program is mapped to

several occupations, such as teaching assistants, except postsecondary; childcare workers; and elementary school teachers, except special education (Table 3.6). The median hourly wage for this program is \$26.10, when weighted by the openings and median hourly wages for each occupation mapped to the program. For context, the California state minimum wage is \$16.00¹³ per hour, and the living wage in the Inland Empire is \$27.11 per hour for a household with two working adults and two children.¹⁴ Program expansion looks promising, although the district should ensure that the curriculum is training for the higher wage occupations mapped to the program, particularly focusing on Elementary School Teachers, Except Special Education Teachers, which commands a high wage well above the living wage for the region.

While the gaps are important to keep in mind for building or expanding programs, the surpluses are equally important to ensure the district is training students with skills the regional workforce requires. There is one transfer-track degree program at SBCCD with a significant surplus, Sociology, General, with a surplus of 645. It's important to keep and mind that along with filling occupations mapped to this program, completers will also gain additional marketable skills such as critical thinking, communication skills and research.

Using Table 3.6, this step-by-step process of evaluating occupational gaps by their median hourly wage rates can be applied to the other SBCCD transfer-track degree programs with a significant gap. In general, gaps around occupations with high wages should be considered more noteworthy than gaps around occupations with low wages. Also, if the occupational forecasts around a certain gap are not positive, the gap may not be worth further consideration. Keep in mind that there could be other sources of skilled workers filling the gaps, such as unemployed workers or workers from outside the region.

Table 3.6: Occupations Mapped to SBCCD's Transfer-Track Degree Level Programs with a Significant Gap

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
San Bernardino Valley College						
BUSINESS ADMINISTRATION & MANAGEMENT, GENERAL (CIP CODE 52.0201)						
43-4051	Customer Service Representatives	19,024	20,420	1,397	896	\$18.48
11-1021	General & Operations Managers	23,115	27,455	4,340	822	\$48.73*
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	14,014	15,269	1,255	667	\$29.86*
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	605	\$30.34*
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	8,915	10,195	1,280	522	\$27.63*
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	518	\$21.57

¹³ The California minimum wage as of January 1, 2024, is \$16.00 per hour. Source: U.S. Department of Labor.

¹⁴ Living wage calculations provided by Dr. Amy K. Glasmeier and the Massachusetts Institute of Technology. See Appendix 8.

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
13-2011	Accountants & Auditors	9,618	10,639	1,021	517	\$37.50*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	454	\$30.16*
13-1161	Market Research Analysts & Marketing Specialists	5,923	7,158	1,234	352	\$29.81*
13-1071	Human Resources Specialists	7,283	8,436	1,152	274	\$30.82*
13-1111	Management Analysts	6,978	8,013	1,035	272	\$40.62*
11-2022	Sales Managers	7,362	7,994	632	267	\$46.26*
11-3031	Financial Managers	5,259	6,245	986	212	\$63.18*
13-1082	Project Management Specialists	6,225	7,134	909	198	\$44.72*
11-9199	Managers, All Other	12,637	13,900	1,263	153	\$36.31*
15-1232	Computer User Support Specialists	3,500	3,956	456	122	\$29.30*
11-2021	Marketing Managers	2,110	2,384	274	106	\$58.41*
11-3021	Computer & Information Systems Managers	2,509	3,023	514	91	\$77.35*
11-1011	Chief Executives	3,558	3,675	118	87	\$75.00*
41-4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	1,579	1,671	92	77	\$39.68*
11-3121	Human Resources Managers	1,458	1,657	199	46	\$61.40*
EARLY CHILDHOOD EDUCATION & TEACHING (CIP CODE 13.1210)						
25-9045	Teaching Assistants, Except Postsecondary	16,882	19,263	2,381	640	\$18.53
39-9011	Childcare Workers	10,942	9,996	(945)	265	\$16.17
25-2021	Elementary School Teachers, Except Special Education	21,333	24,214	2,881	244	\$46.56*
25-2011	Preschool Teachers, Except Special Education	4,622	5,167	545	179	\$17.91
25-2052	Special Education Teachers, Kindergarten & Elementary School	2,727	3,126	399	87	\$40.69*
25-9031	Instructional Coordinators	1,011	1,226	215	38	\$49.43*
25-2012	Kindergarten Teachers, Except Special Education	443	586	142	34	\$52.78*
11-9032	Education Administrators, Kindergarten through Secondary	2,845	3,314	469	23	\$64.45*
25-2051	Special Education Teachers, Preschool	253	307	53	9	\$21.91
11-9031	Education & Childcare Administrators, Preschool & Daycare	607	633	27	9	\$26.82
21-1021	Child, Family, & School Social Workers	4,377	5,297	921	9	\$29.56*
19-3034	School Psychologists	923	1,043	120	0	\$50.12*
SPANISH LANGUAGE & LITERATURE (CIP CODE 16.0905)						
25-2021	Elementary School Teachers, Except Special Education	21,333	24,214	2,881	495	\$46.56*
39-7018	Tour & Travel Guides	549	615	66	40	\$17.32
25-2031	Secondary School Teachers, Except Special & Career/Technical Education	11,390	13,187	1,797	24	\$50.71*
27-3091	Interpreters & Translators	773	821	48	20	\$27.65

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
25-2022	Middle School Teachers, Except Special & Career/Technical Education	3,144	3,957	814	16	\$48.88*
33-3021	Detectives & Criminal Investigators	1,355	1,589	235	15	\$53.18*
25-3011	Adult Basic Education, Adult Secondary Education, & English as a Second Language Instructors	231	227	(4)	13	\$45.83*
FOODS, NUTRITION, & WELLNESS STUDIES, GENERAL (CIP CODE 19.0501)						
35-1012	First-Line Supervisors of Food Preparation & Serving Workers	15,324	18,922	3,598	326	\$17.63
11-9051	Food Service Managers	5,392	6,212	820	58	\$25.58
29-1031	Dietitians & Nutritionists	755	941	186	0	\$38.35*
21-1094	Community Health Workers	657	848	191	0	\$21.72
11-9039	Education Administrators, All Other	917	1,019	102	0	\$45.61*
29-2051	Dietetic Technicians	307	362	55	0	\$17.44
HUMAN NUTRITION (CIP CODE 19.0504)						
35-1012	First-Line Supervisors of Food Preparation & Serving Workers	15,324	18,922	3,598	326	\$17.63
11-9051	Food Service Managers	5,392	6,212	820	58	\$25.58
29-1031	Dietitians & Nutritionists	755	941	186	0	\$38.35*
21-1094	Community Health Workers	657	848	191	0	\$21.72
11-9039	Education Administrators, All Other	917	1,019	102	0	\$45.61*
29-2051	Dietetic Technicians	307	362	55	0	\$17.44
Crafton Hills College						
BUSINESS ADMINISTRATION & MANAGEMENT, GENERAL (CIP CODE 52.0201)						
43-4051	Customer Service Representatives	19,024	20,420	1,397	896	\$18.48
11-1021	General & Operations Managers	23,115	27,455	4,340	822	\$48.73*
41-4012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	14,014	15,269	1,255	667	\$29.86*
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	605	\$30.34*
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, & Travel	8,915	10,195	1,280	522	\$27.63*
41-1011	First-Line Supervisors of Retail Sales Workers	16,104	16,970	866	518	\$21.57
13-2011	Accountants & Auditors	9,618	10,639	1,021	517	\$37.50*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	454	\$30.16*
13-1161	Market Research Analysts & Marketing Specialists	5,923	7,158	1,234	352	\$29.81*
13-1071	Human Resources Specialists	7,283	8,436	1,152	274	\$30.82*
13-1111	Management Analysts	6,978	8,013	1,035	272	\$40.62*
11-2022	Sales Managers	7,362	7,994	632	267	\$46.26*

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
11-3031	Financial Managers	5,259	6,245	986	212	\$63.18*
13-1082	Project Management Specialists	6,225	7,134	909	198	\$44.72*
11-9199	Managers, All Other	12,637	13,900	1,263	153	\$36.31*
15-1232	Computer User Support Specialists	3,500	3,956	456	122	\$29.30*
11-2021	Marketing Managers	2,110	2,384	274	106	\$58.41*
11-3021	Computer & Information Systems Managers	2,509	3,023	514	91	\$77.35*
11-1011	Chief Executives	3,558	3,675	118	87	\$75.00*
41-4011	Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	1,579	1,671	92	77	\$39.68*
11-3121	Human Resources Managers	1,458	1,657	199	46	\$61.40*
SPORTS, KINESIOLOGY, & PHYSICAL EDUCATION/FITNESS, GENERAL (CIP CODE 31.0501)						
39-9032	Recreation Workers	3,868	4,638	770	376	\$15.51
39-9031	Exercise Trainers & Group Fitness Instructors	4,293	5,309	1,017	313	\$22.67
27-2022	Coaches & Scouts	2,412	2,790	378	175	\$20.15
31-2022	Physical Therapist Aides	756	888	132	100	\$16.32
25-2031	Secondary School Teachers, Except Special & Career/Technical Education	11,390	13,187	1,797	39	\$50.71*
11-9151	Social & Community Service Managers	2,252	2,881	630	36	\$33.17*
25-2022	Middle School Teachers, Except Special & Career/Technical Education	3,144	3,957	814	26	\$48.88*
29-1031	Dietitians & Nutritionists	755	941	186	26	\$38.35*
21-1091	Health Education Specialists	585	713	128	21	\$28.32*
25-2059	Special Education Teachers, All Other	526	618	92	18	\$42.96*
27-2023	Umpires, Referees, & Other Sports Officials	179	164	(15)	17	\$17.26
21-1094	Community Health Workers	657	848	191	15	\$21.72
11-9039	Education Administrators, All Other	917	1,019	102	8	\$45.61*
27-2021	Athletes & Sports Competitors	124	94	(31)	8	\$32.79*
29-2051	Dietetic Technicians	307	362	55	7	\$17.44
29-9091	Athletic Trainers	264	340	76	6	\$32.67*
29-1125	Recreational Therapists	172	206	33	5	\$39.00*
29-1128	Exercise Physiologists	120	141	21	2	\$31.89*
29-1229	Physicians, All Other	3,342	3,781	440	0	\$34.69*

*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11. Programs award completers with an associate degree, but the demand for jobs considers a bachelor's degree level of education.

Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

LIBERAL ARTS TRANSFER STUDENTS

A number of students attend SBCCD with the intention of transferring to a four-year institution to receive a bachelor’s degree. Although these students study any number of topics at the college, a large portion of them receive an Associate of Arts in Liberal Arts.

Once liberal arts students leave SBCCD, their educational and career track is difficult to predict. They could attend a nearby four-year institution, and they could study any number of different programs that will ultimately determine their future careers. What can be shown is that over the next 10 years, jobs that require a bachelor’s degree are projected to be in high demand. In any given year between 2023 and 2033, 65,080 job openings will require a bachelor’s degree level of education.

This section shows the top occupations mapped to liberal arts programs, using Lightcast’s Profile Analytics database, which contains more than 125 million profiles of people in the U.S. from all the major professional social media websites. To identify the top occupations, the Profile Analytics database is filtered in several ways. First, profiles include people who have an associate degree or a bachelor’s degree level of education. Second, the profiles list liberal arts as the person’s program of study. Liberal arts programs are classified as CIP codes 24.01, 30.00, and 30.99 at the four-digit level. Finally, the database includes profiles most recently updated, from as early as 2010. Using these search parameters, 263,200 profiles are found in the database, and the occupations in Table 3.7 represent the most common jobs of liberal arts alumni.

As shown in the table, a considerable number of job openings are for retail salespersons, customer service representatives, and secretaries & administrative assistants. Together, the three occupations account for 46% of all the liberal arts program’s job openings. The profiles data also includes various kinds of managers and supervisors, which are occupations with relatively higher wage rates. A liberal arts program expansion is not warranted at this time, but SBCCD administrators should be aware that liberal arts graduates can find success in a variety of business-related occupations beyond retail sales and customer service.

Table 3.7: Occupations Related to Liberal Arts Programs

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
41-2031	Retail Salespersons	38,805	41,910	3,105	6,182	\$16.08
43-4051	Customer Service Representatives	19,024	20,420	1,397	2,797	\$18.48
11-1021	General & Operations Managers	23,115	27,455	4,340	2,442	\$48.73*
43-6014	Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	16,898	17,346	448	1,979	\$22.62
43-1011	First-Line Supervisors of Office & Administrative Support Workers	15,546	16,841	1,295	1,680	\$30.34*
13-1199	Business Operations Specialists, All Other	12,360	13,882	1,521	1,271	\$30.16*
11-9199	Managers, All Other	12,637	13,900	1,263	1,082	\$36.31*

SOC CODE	SOC TITLE	2023 JOBS	2033 JOBS	JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE
13-2011	Accountants & Auditors	9,618	10,639	1,021	879	\$37.50*
21-1093	Social & Human Service Assistants	5,646	7,062	1,416	786	\$20.89
13-1071	Human Resources Specialists	7,283	8,436	1,152	763	\$30.82*
13-1111	Management Analysts	6,978	8,013	1,035	706	\$40.62*
11-2022	Sales Managers	7,362	7,994	632	618	\$46.26*
11-3031	Financial Managers	5,259	6,245	986	484	\$63.18*
15-1252	Software Developers	4,628	5,941	1,313	412	\$61.66*
25-3099	Teachers & Instructors, All Other	2,634	2,852	218	354	\$37.27*
43-6011	Executive Secretaries & Executive Administrative Assistants	3,221	3,032	(189)	322	\$33.46*
15-1232	Computer User Support Specialists	3,500	3,956	456	294	\$29.30*
11-1011	Chief Executives	3,558	3,675	118	253	\$75.00*
11-2021	Marketing Managers	2,110	2,384	274	203	\$58.41*
11-3121	Human Resources Managers	1,458	1,657	199	136	\$61.40*

*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11
Source: Lightcast gap model.

SUMMARY

Across all award levels, there are a total of 18 programs associated with significant workforce gaps—with five programs having gaps at multiple award levels.

SBCCD offers numerous non-credit programs but due to data limitations only one Heavy/Medium Duty Truck Engine & Fuel Injection Technology was analyzed. Using a customized non-credit program-to-occupation map, the program is analyzed using similar methods to the program demand gap analysis. With regards to specific programmatic results, Heavy/Medium Duty Truck Engine & Fuel Injection Technology is currently well aligned with current marketplace demand, producing approximately as many completers as there are openings in the region. Additionally, the programs' completers command wages at or approaching the living wage for the region. It is important to note that occupations mapped to this program are expected to grow over the next decade. With this in mind the district should focus on maintaining program quality.

SBCCD offers 61 certificate level programs, eight of which have a significant gap above the 500-openings level of significance. With regards to specific programmatic results, the following certificate level programs should be considered for expansion due to their gap and median hourly wage: Business Administration & Management, General; Welding Technology/Welder; Automobile/Automotive Mechanics Technology/Technician; Diesel Mechanics Technology/Technician; Manufacturing Engineering Technology/Technician; and Electrical &

Power Transmission Installation/Installer, General. The three largest certificate level programs offered by SBCCD in terms of average annual completions are Criminal Justice/Police Science, Emergency Medical Technology/Technician (EMT Paramedic), and Fire Science/Fire-fighting. Criminal Justice/Police Science has a gap that is not great enough to be considered significant, along with the high wage that completers command, it is recommended that the district focus on program quality. Fire Science/Fire-Fighting currently has a surplus of 113. This surplus is not great enough to be significant but should be considered when evaluating the programs health. The wages of Fire Science/Fire-Fighting is \$32.78 which is greater than the living wage for the region, this is in part due to a number of occupations with high wages, these occupations may require work experience, it is recommend that the district focus on prepare students to fill these high wage occupations. The EMT Paramedic program has a surplus of approximately 200 completers and a median hourly wage below the living wage in the region. This surplus and lower wage indicate there is low regional demand for the program. With this in mind, the district should work with industry partners to find employment opportunities for program graduates outside of the Inland Empire. It is worth noting, however, that some of these completers may be earning their EMT certification to qualify for a position in a career outside EMT-specific occupations.

The certificate level programs with the top three largest gaps are:

- Cooking & Related Culinary Arts, General (gap of 4,680; median hourly wage \$18.17)
- Business Administration & Management, General (gap of 4,336; median hourly wage \$30.57)
- Child Care Provider/Assistant (gap of 1,455; median hourly wage \$18.02)

SBCCD offers 84 associate degree level programs, six of which have a significant gap above the 500-openings level of significance. Two programs at this award level have a significant surplus of completions. With regards to specific programmatic results, the following associate degree programs should be considered for expansion due to their gap and median hourly wage: Business Administration & Management, General; Welding Technology/Welder; and Electrical & Power Transmission Installation/Installer, General. The three largest associate degree programs offered by SBCCD in terms of average annual completions are Biological & Physical Sciences; Business Administration & Management, General; and Psychology, General. Biological & Physical Sciences as well as Psychology, General have a significant surplus. Psychology's surplus is just greater than the 500 needed to be considered significant. When examining this program, it should be considered that graduates are likely to find employment outside of their field. As well as their ability to work in occupations directly related to these their field students in both programs will also gain skill in critical thinking research and communication which are marketable across a variety of occupations. Biological & Physical Sciences' surplus is greater than 1,500, three times that of the significance level. It is important to note that this surplus drops to 378 at the bachelor's degree level, and the median hourly wage also increases from \$23.36 to \$39.85. This is indicative of a bachelor's degree in this field the share of job openings for the higher wage occupations mapped to the program is greater at the bachelor's degree level. The district should focus on finding placement for these

students in 4-year programs. In contrast, Business Administration & Management, General has a significant gap of 3,609. Along with its significant gap, completers of this program command a wage above that of the living wage for the region. It's important to consider that this high wage is in part due to the fact that the program is mapped to a number of management occupations which may not be available to completers without additional work experience.

The associate degree programs with the top three largest gaps are:

- Business Administration & Management, General (gap of 3,609; median hourly wage \$31.90)
- Administrative Assistant & Secretarial Science, General (gap of 1,273; median hourly wage \$20.84)
- Accounting Technology/Technician & Bookkeeping (gap of 976; median hourly wage \$23.38)

SBCCD offers 35 transfer-track degree programs. In other words, a program completer could readily transfer into a similar bachelor's degree level program at another postsecondary educational institution in the state. Of these programs, four have a significant gap above the 500-openings level of significance. One program at this level has a significant surplus of program completions. With regards to specific programmatic results, the following transfer-track degree programs should be considered for expansion due to their gap and median hourly wage: Business Administration & Management, General; Early Childhood Education & Teaching; and Spanish Language & Literature. The three largest transfer-track degree programs offered by SBCCD in terms of average annual completions are Business Administration & Management, General; Psychology, General; and Sociology, General. Business Administration & Management currently has the largest gap of any program at the transfer-track level with a gap of 4,684 job openings. This gap is indicative of a major opportunity and means that the program is a prime candidate for expansion. Along with its large gap the program commands a high median hourly wage of \$34.85, which is greater than the living wage in the region. Psychology, General currently has a small gap of 55 job openings. This is notable because at the associate degree level the program has a significant surplus. When combined with the higher wage that bachelor's degree completers command, this indicates that the success of these students is highly correlated to their completion of a bachelor's degree program, meaning the district should focus on matriculating these students into bachelor's degree programs. Sociology, General has a significant surplus of 645, but commands a wage of \$35.93. It should be noted that in addition to filling occupations which are mapped to this program, completers receive a number of other marketable skills which prepare them to fill a number of occupations. With this in mind, the district should focus on maintaining program quality. Lastly, the success of transfer-track programs is also highly dependent on the ease with which students can transfer to a four-year institution. Therefore, it is important that SBCCD continues to work with the four-year institutions in the region to streamline this process.

The transfer-track degree level programs with the three largest gaps are:

- Business Administration & Management, General (gap of 4,684; median hourly wage \$34.85)
- Early Childhood Education & Teaching (gap of 1,462; median hourly wage \$26.10)
- Sports, Kinesiology, & Physical Education/Fitness, General (gap of 956; median hourly wage \$22.30)

A liberal arts program expansion is not recommended at this time, but SBCCD administrators should be aware that students can find success in a variety of business-related occupations. Using the Profile Analytics database, many liberal arts program completers are currently employed as administrative assistants and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in the Inland Empire, and the district's liberal arts program serves as a starting point to students' future career goals.



New Program Opportunities

Thus far, the analysis has centered around programs offered by SBCCD. This chapter looks at workforce gaps that exist within occupations that the district does not currently train for and provides new program recommendations. For each award level, a table shows the occupations' current employment, projected percentage growth over the next decade, average annual projected job openings, average annual completers, gap, and median hourly wage rates. In addition, the figure in the certificate level section details the current annual wage rates for those employed in a selection of occupations.

Recommendations are based solely on the gap and whether or not the occupation looks promising (job growth, wages, etc.). These are the initial findings and should serve as a starting point for further research. SBCCD's administration will still need to undergo steps before deciding whether these programs would be a good fit for the district and the region. This future work could include surveying local employers, analyzing skills and similar programs offered elsewhere, calculating program specific economic impacts, and looking at capacity and capital requirements for building these programs.

OPPORTUNITIES AT THE CERTIFICATE LEVEL

One hundred occupations have been identified as certificate level programmatic areas of opportunity, as shown in Table 4.1. The select occupations present unmet annual job openings within the Inland Empire (i.e. they have a gap), their median hourly wage rates are greater than \$16.00, and the occupations typically require some college education but no degree.

As shown, there is diversity in the types of occupations in the table, with a limited number of job openings in the region for some. Although some occupations have relatively few openings on an annual basis, there may be opportunities to train for multiple occupations found in the table through a single program. The most represented occupational group in the table is production occupations (SOC 51-0000), with 30 occupations and about 21,680 jobs in the region in 2023. The second most represented occupation group is office & administrative support and is followed by installation, maintenance, & repair. Some of SBCCD's current offerings, such as its certificate level Business Administration, General program, may already be teaching the skills needed for employment as one of the various occupations in the table.

Due to the number of opportunities available, SBCCD should prioritize which occupations would result in the best employment outcomes for students. The top three opportunities by median hourly wage are gas plant operators; power distributors & dispatchers; and commercial

pilots. There are also a number of opportunities for SBCCD to support occupations experiencing positive employment growth over the next decade. The top three opportunities by percent job change from 2023 to 2033 are highway maintenance workers; cargo & freight agents; and occupational health & safety technicians. Given the high LQ of the Warehousing & Storage industry in the region, special attention should be paid to occupations which could be filled by completers of a Logistics certificate. These occupations are in high demand partly as a result of recent pandemic related supply chain shocks, which have highlighted how vital these roles are in maintaining a functioning economy.

Table 4.1: SBCCD's Programmatic Areas of Opportunity at the Certificate Level

SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Security Guards	20,063	17.6%	2,124	17	2,106	\$16.38
Carpenters	21,410	4.5%	1,193	6	1,187	\$28.20*
Shipping, Receiving, & Inventory Clerks	15,150	7.1%	1,184	3	1,181	\$18.10
Nursing Assistants	9,370	29.5%	1,263	191	1,072	\$18.09
Hairdressers, Hairstylists, & Cosmetologists	8,879	14.2%	1,081	257	824	\$16.40
First-Line Supervisors of Transportation & Material Moving Workers, Except Aircraft Cargo Handling Supervisors	8,939	25.6%	808	0	808	\$29.63*
Animal Caretakers	3,746	23.5%	489	0	489	\$16.01
Inspectors, Testers, Sorters, Samplers, & Weighers	5,569	7.2%	437	6	430	\$20.32
Packaging & Filling Machine Operators & Tenders	4,564	16.9%	354	0	354	\$17.82
Operating Engineers & Other Construction Equipment Operators	4,590	15.9%	346	2	345	\$36.92*
Billing & Posting Clerks	5,367	8.6%	368	25	343	\$21.37
Production, Planning, & Expediting Clerks	5,459	16.2%	341	3	338	\$24.18
Insurance Sales Agents	5,582	20.6%	245	2	242	\$25.39
Sales & Related Workers, All Other	3,454	8.6%	210	0	210	\$22.40
Massage Therapists	2,608	23.2%	232	35	197	\$21.32
First-Line Supervisors of Housekeeping & Janitorial Workers	2,128	13.9%	188	0	188	\$22.50
Healthcare Support Workers, All Other	2,071	14.9%	184	1	184	\$22.26
First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers	2,869	7.3%	174	2	172	\$26.24
Mobile Heavy Equipment Mechanics, Except Engines	2,283	16.0%	172	0	172	\$30.87*
Tellers	2,676	(5.7%)	171	0	171	\$19.45
Pest Control Workers	1,613	6.6%	166	0	166	\$19.43
Veterinary Assistants & Laboratory Animal Caretakers	1,215	29.5%	155	0	155	\$17.21

SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Weighers, Measurers, Checkers, & Samplers, Recordkeeping	1,540	18.6%	153	0	153	\$21.81
Food Batchmakers	1,199	31.3%	153	0	153	\$16.54
Phlebotomists	1,559	20.5%	167	15	152	\$23.46
Information & Record Clerks, All Other	2,280	13.0%	144	0	144	\$23.92
First-Line Supervisors of Non-Retail Sales Workers	3,660	1.6%	140	1	139	\$31.47*
Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	1,857	2.4%	137	0	137	\$17.18
Licensed Practical & Licensed Vocational Nurses	8,528	19.3%	655	525	130	\$30.36*
Farmers, Ranchers, & Other Agricultural Managers	2,376	(11.1%)	122	13	108	\$17.65
Cargo & Freight Agents	1,061	42.8%	105	2	103	\$22.23
Solar Photovoltaic Installers	1,294	31.7%	95	0	95	\$24.46
Court, Municipal, & License Clerks	1,174	31.3%	93	0	93	\$25.62
Highway Maintenance Workers	630	49.1%	79	0	79	\$24.67
Printing Press Operators	1,092	(4.8%)	78	0	78	\$18.83
Orderlies	654	16.0%	77	1	75	\$24.65
Medical Equipment Preparers	787	19.8%	73	0	73	\$24.05
Mixing & Blending Machine Setters, Operators, & Tenders	909	11.0%	72	0	72	\$19.79
Library Assistants, Clerical	948	12.8%	68	0	68	\$17.83
Legal Secretaries & Administrative Assistants	1,177	(7.1%)	72	8	64	\$17.72
Loan Interviewers & Clerks	1,222	(8.9%)	52	0	52	\$22.25
Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders	670	1.4%	51	0	51	\$19.13
Surgical Technologists	1,092	24.4%	47	0	46	\$29.91
Woodworking Machine Setters, Operators, & Tenders, Except Sawing	717	(2.2%)	45	0	45	\$18.24
Procurement Clerks	930	3.5%	42	0	41	\$20.42
Floral Designers	518	8.5%	40	0	40	\$17.24
Hazardous Materials Removal Workers	445	16.4%	39	0	39	\$22.20
Ophthalmic Medical Technicians	429	22.9%	40	2	38	\$20.39
First-Line Supervisors of Farming, Fishing, & Forestry Workers	615	5.1%	41	3	38	\$21.55
Cutting & Slicing Machine Setters, Operators, & Tenders	514	5.8%	37	0	37	\$18.85
Claims Adjusters, Examiners, & Investigators	1,388	2.6%	36	0	36	\$38.02*
Outdoor Power Equipment & Other Small Engine Mechanics	439	8.8%	36	0	36	\$20.71

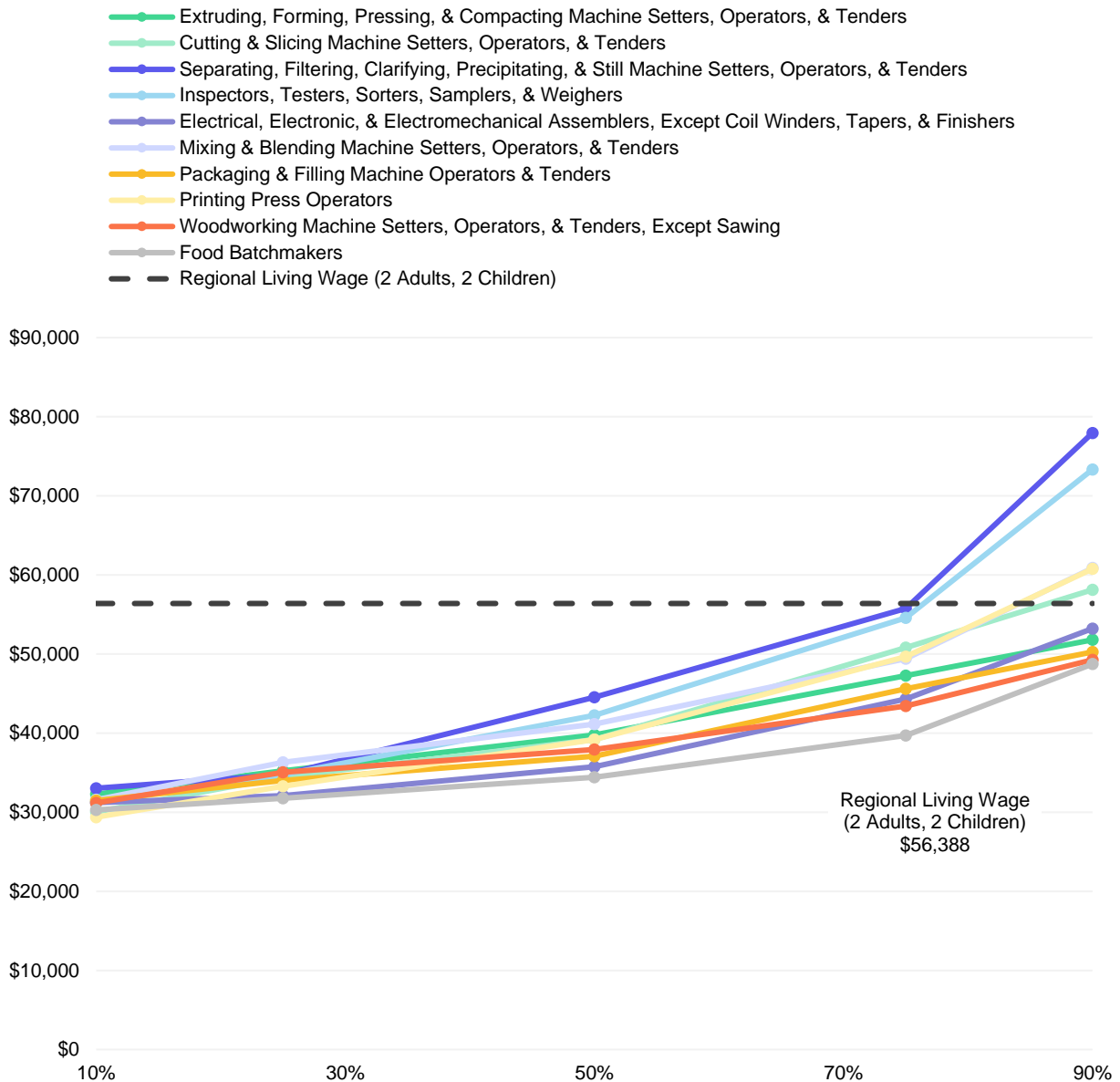
SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Control & Valve Installers & Repairers, Except Mechanical Door	567	5.9%	34	0	34	\$38.17*
Animal Trainers	461	2.5%	34	0	34	\$16.57
Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders	494	16.2%	33	0	33	\$21.41
Brickmasons & Blockmasons	664	(3.3%)	33	0	33	\$28.73*
Chemical Equipment Operators & Tenders	520	3.7%	29	0	29	\$24.22
Travel Agents	436	16.3%	29	0	29	\$23.36
Opticians, Dispensing	912	14.0%	53	26	27	\$23.29
Crushing, Grinding, & Polishing Machine Setters, Operators, & Tenders	365	7.2%	27	0	27	\$22.50
Motorboat Mechanics & Service Technicians	292	11.4%	25	0	25	\$24.18
Plating Machine Setters, Operators, & Tenders, Metal & Plastic	345	(2.7%)	23	0	23	\$19.00
Paving, Surfacing, & Tamping Equipment Operators	299	16.7%	23	0	23	\$28.69*
Dental Assistants	5,364	17.5%	571	549	22	\$22.22
Rail Car Repairers	270	21.5%	22	0	22	\$25.59
Rail-Track Laying & Maintenance Equipment Operators	306	10.5%	21	0	21	\$31.17*
Motorcycle Mechanics	251	3.1%	19	0	19	\$21.78
Engine & Other Machine Assemblers	204	(6.0%)	19	0	19	\$19.90
Recreational Vehicle Service Technicians	237	10.4%	19	0	19	\$26.71*
First-Line Supervisors of Protective Service Workers, All Other	309	19.2%	18	0	18	\$32.26*
Tool & Die Makers	224	3.8%	18	0	18	\$25.60
Office Machine Operators, Except Computer	204	(1.1%)	18	0	18	\$19.61
Gambling Surveillance Officers & Gambling Investigators	163	22.1%	18	0	18	\$16.91
Occupational Health & Safety Technicians	286	35.5%	16	0	16	\$27.04
Title Examiners, Abstractors, & Searchers	354	4.8%	18	1	16	\$30.49*
Dental Laboratory Technicians	254	(15.8%)	16	0	16	\$22.80
Prepress Technicians & Workers	244	(11.6%)	17	1	16	\$18.01
Woodworkers, All Other	229	(2.4%)	16	0	16	\$16.27
Medical Appliance Technicians	223	(3.4%)	16	0	16	\$22.42
Meter Readers, Utilities	172	10.6%	14	0	14	\$30.15*
Farm Equipment Mechanics & Service Technicians	221	5.0%	14	0	14	\$22.32
Cleaning, Washing, & Metal Pickling Equipment Operators & Tenders	161	14.7%	14	0	14	\$17.56
Power Plant Operators	240	14.2%	14	0	14	\$39.45

SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Pesticide Handlers, Sprayers, & Applicators, Vegetation	164	16.4%	13	0	13	\$20.89
Court Reporters & Simultaneous Captioners	265	2.6%	13	0	13	\$43.10*
New Accounts Clerks	263	(5.9%)	13	0	13	\$22.04
Advertising Sales Agents	388	4.2%	13	0	12	\$27.12*
Precision Instrument & Equipment Repairers, All Other	250	4.2%	12	0	12	\$34.92*
Furnace, Kiln, Oven, Drier, & Kettle Operators & Tenders	125	7.7%	11	0	11	\$22.42
Metal-Refining Furnace Operators & Tenders	144	(7.4%)	10	0	10	\$22.70
Commercial Pilots	423	10.8%	10	0	10	\$45.93*
Financial Clerks, All Other	177	15.1%	9	0	9	\$21.70
Semiconductor Processing Technicians	116	(4.3%)	9	0	9	\$17.81
Power Distributors & Dispatchers	179	(10.9%)	8	0	8	\$48.42*
Logging Equipment Operators	76	3.3%	7	0	7	\$28.09
Gas Plant Operators	107	(3.3%)	6	0	6	\$49.24*
Petroleum Pump System Operators, Refinery Operators, & Gaugers	68	28.5%	6	0	6	\$42.77*
Cooling & Freezing Equipment Operators & Tenders	51	26.2%	5	0	5	\$19.78
Pourers & Casters, Metal	67	(12.9%)	5	0	5	\$18.40
Ophthalmic Laboratory Technicians	232	8.2%	18	14	4	\$21.83

*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11
Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

Figure 4.1: Percentile Wage Rates of Top Production Occupations Identified as New Program Opportunities at the Certificate Level



Source: Employees & Self-Employed 2024.1.

The annual wage rates of the top production occupations by gap size from Table 4.1 are shown in Figure 4.1, with an emphasis on low and high wage-earners. For those people in the Inland Empire employed as separating, filtering, clarifying, precipitating, & still machine setters, operators, & tenders, annual wage rates are the highest. Notably, the difference between the lowest wage earners in the occupation (10th percentile) and the highest (90th percentile) is about \$45,000. For SBCCD students, these results may indicate that time spent working as separating, filtering, clarifying, precipitating, & still machine setters, operators, & tenders could lead to progressively higher wages throughout their careers. On the other hand, there is about

a \$18,000 difference between the lowest and highest wage earners for woodworking machine setters, operators, & tenders, except sawing. Data on percentile wage rates highlight the occupations that should be incorporated into a new or existing SBCCD program, for the benefit of students first coming into the region’s labor market or those looking to change career paths.

OPPORTUNITIES AT THE ASSOCIATE DEGREE LEVEL

Fewer occupations, compared to the previous section, have been identified as associate degree level programmatic areas of opportunity (Table 4.2). There are not as many occupations that specifically require such an education, and most have been considered in the previous chapter’s analysis. Of the 17 occupations in the table, five are related to healthcare practitioners & technical occupations (SOC 29-0000), with about 5,020 jobs in the region. Furthermore, the district should consider developing an associate degree Physical Therapy program, seeing that a level of education is valuable in the region’s labor market. While the gaps for many of these occupations are smaller in size, many of these occupations provide critical healthcare services to residents in the Inland Empire and completers could likely find employment in other areas of the state. Additionally, nearly all occupations are projected to grow over the next decade.

Table 4.2: SBCCD’s Programmatic Areas of Opportunity at the Associate Degree Level

SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Physical Therapist Assistants	915	46.8%	116	32	84	\$36.98*
Paralegals & Legal Assistants	1,484	16.4%	77	14	63	\$29.08*
Occupational Therapy Assistants	244	65.2%	38	0	38	\$37.21*
Veterinary Technologists & Technicians	810	39.0%	68	31	38	\$22.37
Medical Equipment Repairers	483	22.6%	30	0	30	\$27.97*
Forest & Conservation Technicians	582	7.9%	26	0	26	\$22.06
Morticians, Undertakers, & Funeral Arrangers	268	16.5%	22	0	22	\$20.72
Mechanical Drafters	552	0.0%	27	5	22	\$27.49*
Cardiovascular Technologists & Technicians	488	20.7%	18	0	18	\$30.68*
Drafters, All Other	347	(1.8%)	16	1	15	\$31.49*
Electrical & Electronics Drafters	328	2.3%	16	2	14	\$29.70*
Magnetic Resonance Imaging Technologists	300	28.1%	12	0	12	\$46.44*
Legal Support Workers, All Other	362	9.3%	11	3	8	\$21.96
Mechanical Engineering Technologists & Technicians	118	14.6%	7	0	7	\$28.03*

SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Embalmers	43	17.0%	4	0	4	\$22.04
Funeral Home Managers	141	20.0%	4	0	4	\$26.01
Electro-Mechanical & Mechatronics Technologists & Technicians	67	13.5%	4	1	3	\$29.11*
Dental Hygienists	1,537	26.6%	89	88	2	\$47.19*

*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11. Numbers may not sum due to rounding.

Source: Lightcast program demand gap model.

OPPORTUNITIES AT THE TRANSFER-TRACK DEGREE LEVEL

As shown in Table 4.3, 40 occupations have been identified as transfer-track degree level programmatic areas of opportunity. The select occupations present unmet annual job openings within the Inland Empire (i.e., they have a gap), their median hourly wage rates are greater than \$16.00, and the occupations typically require a bachelor's degree level of education.

The table shows a diverse set of occupations, with a limited number of job openings in the region for some. Although some occupations have relatively few openings on an annual basis, there may be opportunities to train for multiple occupations found in the table through a single program. The most represented occupational group in the table is business & financial operations occupations (SOC 13-0000), with twelve occupations and about 12,040 jobs in the region in 2023. The second most represented occupation group is architecture & engineering and is followed by education, training, & library. Some of SBCCD's current offerings, such as its transfer-track degree level Business Administration, General program, may already be teaching the skills needed for employment as one of the various managers in the table. Additionally, there are several occupations that potentially require finance specialization, the district could consider offering a specialized finance program or expanding current business programs to offer a finance emphasis. Additionally, there are a number of occupations related to engineering fields. These occupations have smaller gaps but command wages well above the living wage for the region, these occupations are spread over a number of engineering disciplines. This indicates there may be value in a program which prepares completers to study engineering generally and allows them to specialize in a discipline at a four year institution.

Due to the number of opportunities available, SBCCD should prioritize which occupations would result in the best employment outcomes for students. The top three opportunities by median hourly wage are electronics engineers, except computer; marine engineers & naval architects; and compensation & benefits managers. There are also a number of opportunities for SBCCD to support occupations experiencing positive employment growth over the next decade. The top three opportunities by percent job change from 2023 to 2033 are career/technical education teachers, secondary school; agricultural engineers; and therapists, all other.

Table 4.3: SBCCD's Programmatic Areas of Opportunity at the Transfer-Track Degree Level

SOC TITLE	2023 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE
Training & Development Specialists	3,563	19.0%	175	1	175	\$27.18*
Civil Engineers	3,181	17.7%	160	12	149	\$51.53*
Securities, Commodities, & Financial Services Sales Agents	3,000	6.6%	141	1	140	\$24.79
Logisticians	2,134	30.4%	121	0	121	\$34.54*
Educational Instruction & Library Workers, All Other	2,909	9.0%	92	0	92	\$24.25
Loan Officers	2,224	(4.2%)	77	1	76	\$30.26*
Interior Designers	929	11.5%	68	1	67	\$31.79*
Personal Financial Advisors	1,554	8.9%	65	1	64	\$38.53*
Directors, Religious Activities & Education	1,250	0.7%	59	9	49	\$24.12
Designers, All Other	771	3.5%	38	1	37	\$27.56*
Compensation, Benefits, & Job Analysis Specialists	640	16.2%	31	0	30	\$30.41*
Sales Engineers	388	9.6%	27	0	27	\$48.33*
Electrical Engineers	1,150	11.3%	44	20	24	\$48.17*
Purchasing Managers	477	14.7%	22	0	22	\$54.20*
Agricultural Inspectors	263	9.7%	20	0	20	\$21.74
Training & Development Managers	394	14.1%	17	0	17	\$49.65*
Electronics Engineers, Except Computer	697	11.3%	27	10	16	\$58.83*
Insurance Underwriters	403	(1.9%)	16	0	16	\$40.02*
Therapists, All Other	590	32.7%	17	3	13	\$33.75*
Advertising & Promotions Managers	129	21.1%	11	1	10	\$48.48*
Credit Counselors	204	7.9%	9	0	9	\$23.59*
Foresters	85	20.0%	7	0	7	\$25.27
Compensation & Benefits Managers	107	14.3%	5	0	5	\$57.67*
Agents & Business Managers of Artists, Performers, & Athletes	159	(32.7%)	7	2	5	\$29.55
Career/Technical Education Teachers, Middle School	151	13.9%	6	2	4	\$48.75*
Career/Technical Education Teachers, Secondary School	238	44.7%	12	8	4	\$51.66*
Actuaries	91	21.9%	4	1	3	\$56.27*
Fish & Game Wardens	49	10.7%	3	0	3	\$38.49*
Materials Engineers	131	8.6%	6	4	2	\$46.02*
Marine Engineers & Naval Architects	24	15.6%	1	0	1	\$58.24*
Agricultural Engineers	10	32.9%	1	0	1	\$41.20*

*: An asterisk indicates that the wage for a particular occupation is greater than the living wage for the region which is \$27.11
Numbers may not sum due to rounding.
Source: Lightcast program demand gap model.

SUMMARY

One hundred certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, many of which are related to production occupations. At the associate degree level, there are fewer opportunities for new programs, considering the college's current offerings. Nonetheless, SBCCD should consider new programs related to healthcare practitioners & technical occupations, whether its focus is on job openings in the Inland Empire or California. Another 31 transfer-track degree level programmatic areas of opportunity were identified in the program demand gap analysis, many of which are related to business & financial operations occupations. Some program opportunities may be related to the college's current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the region's current and projected labor market demand.