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2022 INLAND EMPIRE/DESERT REGIONAL WORKFORCE DEMAND ASSESSMENT



Inland Empire/Desert Region
Center of Excellence for
Labor Market Research



C.O.E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

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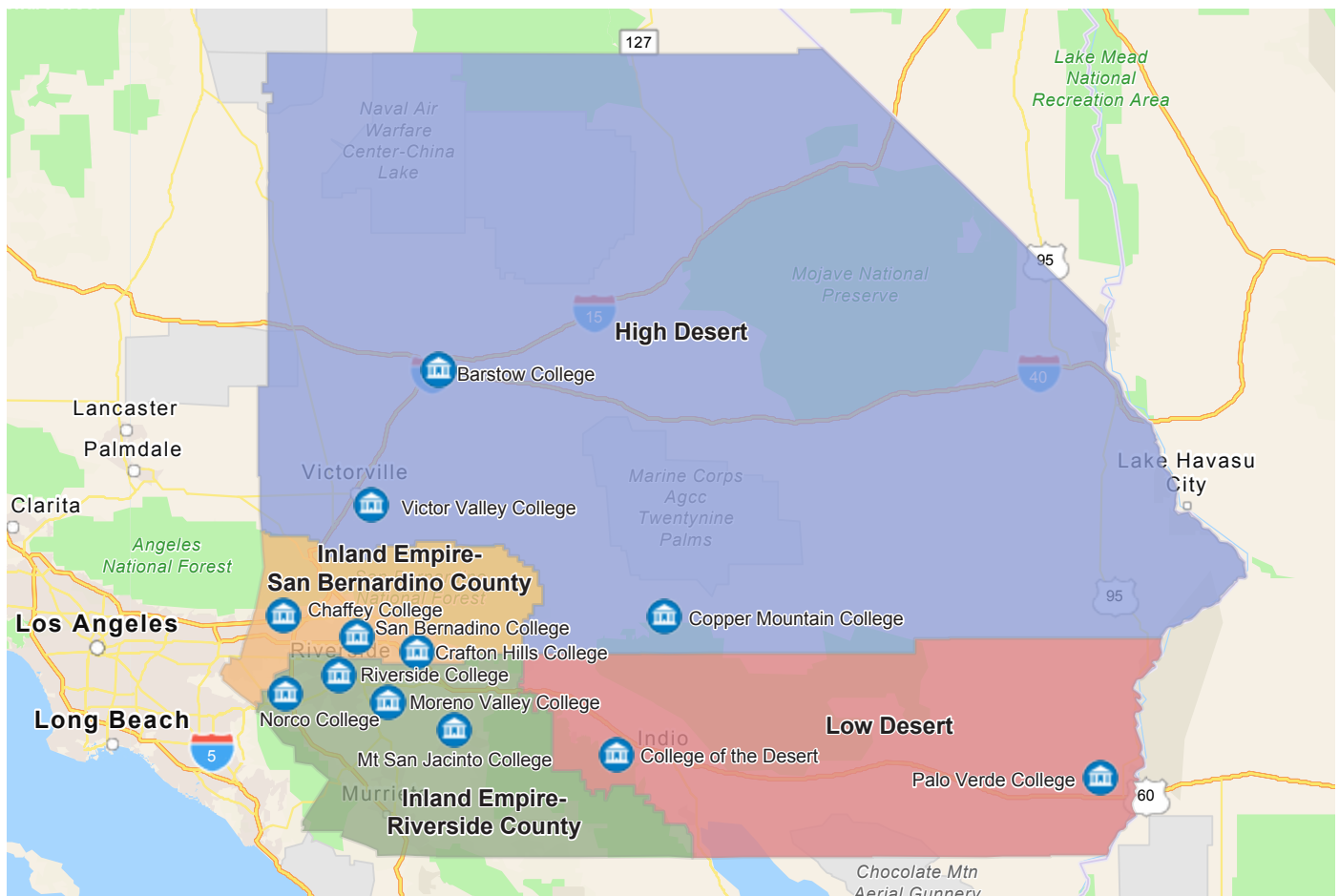
INLAND EMPIRE/DESERT REGIONAL OVERVIEW

Located in Southern California, the Inland Empire/Desert Region is composed of Riverside and San Bernardino counties and is among the largest, most diverse, and fastest-growing metro areas in California (Exhibit 1). The two-county region spans more than 27,000 square miles, slightly larger in area than West Virginia, and was home to approximately 4.7 million residents in 2021. The region is diverse geographically (containing deserts, mountains, agricultural land, and sprawling suburbs) and has a diverse population and business composition.

To assist regional community colleges with strategic planning and career education (CE) program development, the Inland Empire/Desert Region Center of Excellence (COE) conducted a workforce demand assessment to identify high-quality job opportunities for investment. This analysis identifies high-quality occupations that show strong workforce demand and offer median hourly earnings that exceed the state's living wage standard. The occupations highlighted in this assessment may be used to calibrate or develop CE training programs designed to address the region's in-demand and high-wage job opportunities.

The region contains 12 community colleges within nine community college districts as well as 56 high school districts. The California Community Colleges Chancellor's Office (CCCCO) has identified 10 priority CE sectors for community college program alignment, enhancement, and development. This report analyzes occupations that require entry-level education of either high school, community college, or a bachelor's degree that fall within with these sectors and the 15 California Department of Education (CDE) Industry Sectors.

Exhibit 1: Community Colleges and Subregions in the Inland Empire/Desert Region: Inland Empire-Riverside, Inland Empire-San Bernardino, High Desert, Low Desert



Source: COE, Esri

Given the Inland Empire/Desert Region's geographic size and diverse needs, future assessments will further explore four distinct subregions within the greater area. These subregional assessments will identify high-quality job opportunities for those choosing to learn, work, and live in their local communities. These subregions and representative communities include:



Inland Empire-San Bernardino County (Metro-1):

San Bernardino, Ontario, Rancho Cucamonga, Chino, Fontana, Yucaipa, Big Bear Lake



Inland Empire-Riverside County (Metro-2):

Riverside, Temecula, Murrieta, Norco, Moreno Valley, Eastvale



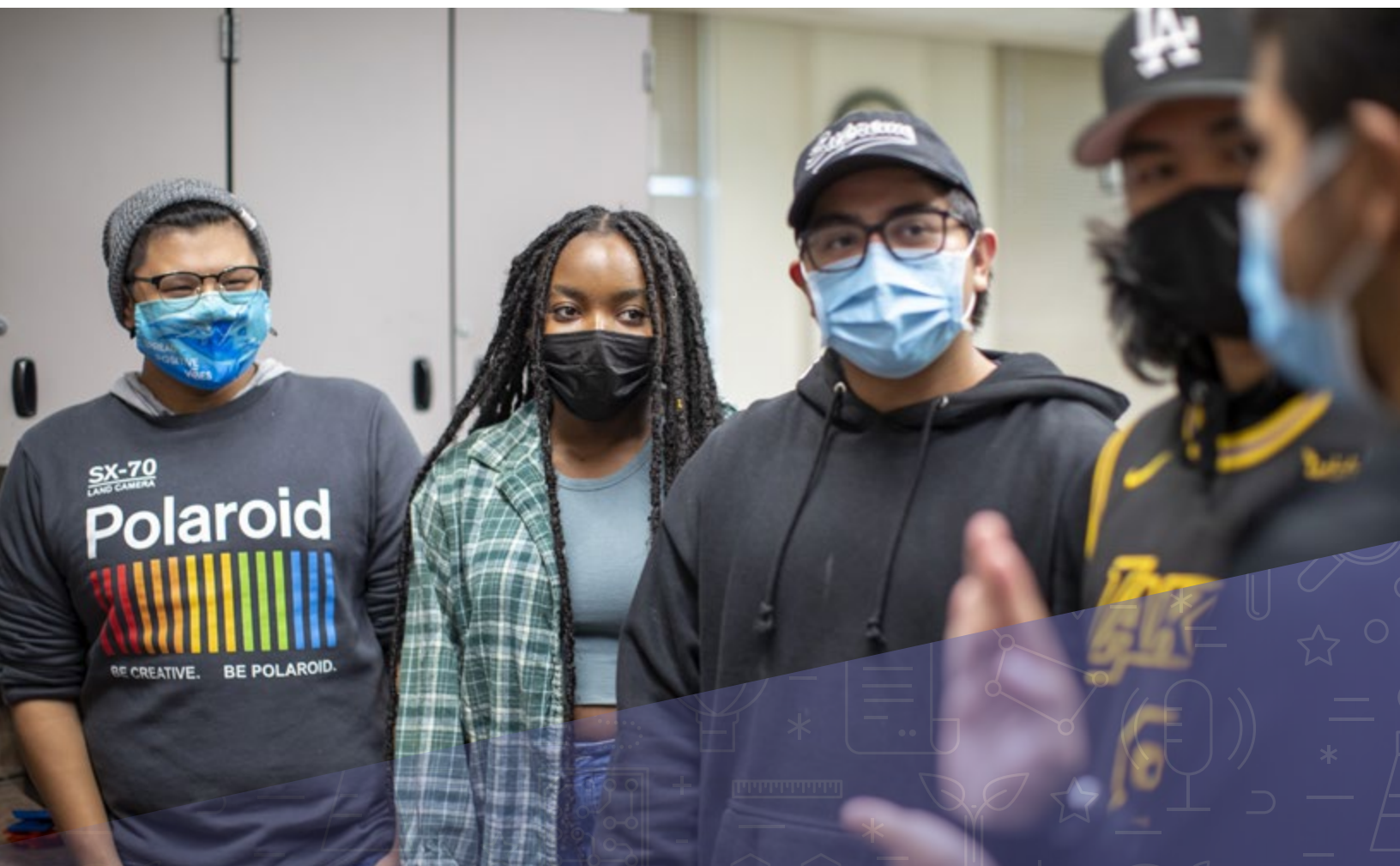
High Desert (San Bernardino County):

Victorville, Barstow, Needles, Adelanto, Hesperia, Twentynine Palms



Low Desert (Riverside County):

Blythe, Palm Springs, Palm Desert, Indio, Coachella



METHODOLOGY AND DATA SOURCES

This report focuses on occupations identified through the Bureau of Labor Statistics' (BLS) Standard Occupational Classification (SOC) System that are crosswalked to California Community Colleges Taxonomy of Programs (TOP) codes. These occupations are most relevant for students who enroll in community college education and training programs. This report analyzes occupations that require entry-level education of either high school, community college, or a bachelor's degree the 10 CCCC sectors and 15 CDE sectors. The regional analysis by sector allows for a comprehensive evaluation of where high-quality jobs exist and where colleges may invest in CE programs to address labor market demand.

A program inventory study was conducted for each CCCC sector, examining each college offering related programs in the region. Current occupational employment (2021 job count), projected demand (annual job openings and growth rate), and earnings associated with occupations in each sector are included in the assessment.

For each sector, occupations are highlighted that meet the high-quality job designation definition, i.e., occupations that are both in demand and high wage. For this study, an occupation is considered in-demand if it has 100 or greater regional annual job openings over the next five years. Occupations are considered high wage if their median hourly wage meets or exceeds \$21.82 per hour, the MIT living wage standard for a single adult in California. Further information on MIT Living Wage Standard Methodology is available on their website.¹

Labor market data in this report is sourced from Lightcast 2022.2 (formerly Emsi). The community college program inventory was sourced from the Chancellor's Office Curriculum Inventory (COCI 2.0) and verified by comparing the inventory with community college course catalogs. Each sector contains a list of existing program offerings and programs currently not offered by regional community colleges.

Job skills associated with occupations or groupings of occupations can provide insight into the competencies needed for employment. O*NET skills data reflects the skills historically required for occupational employment. Each sector contains a list of occupational skills from O*NET that are more relevant to that sector than other sectors. Each sector section in this report contains a job advertisement (ad) overview, including employers posting the most ads, common job titles, and the most frequently requested specialized and soft skills. Lightcast job posting data provides real-time insight into employer demand for high-quality occupations in each sector over the last 12 months, from June 2021 to May 2022.



¹ MIT Living Wage, "Living Wage Calculator for California," 2022, accessed August 8, 2022, <https://livingwage.mit.edu/states/06>.

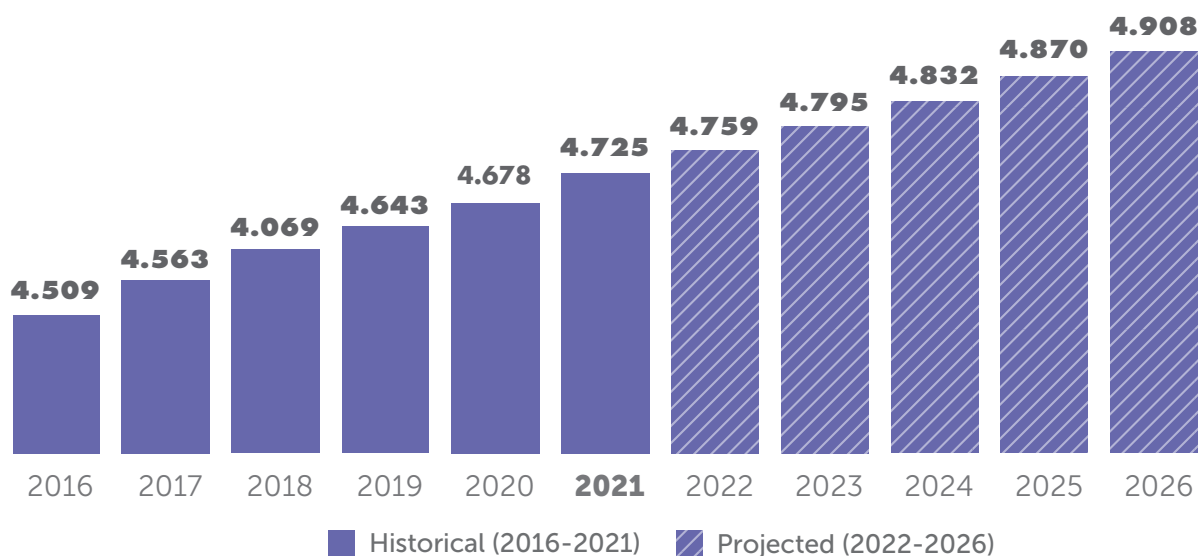
REGIONAL DEMOGRAPHICS AND LABOR FORCE

This section analyzes regional demographic characteristics, including population size, gender, race/ethnicity, age, educational attainment, and labor force participation. Providing foundational information on a region’s demographic composition may assist with ensuring that all residents are equitably served by local educational institutions.

Population

In 2021, the region contained about 4.7 million residents, or approximately 12% of California’s 39.5 million residents (Exhibit 2). Over the next five years, between 2021 and 2026, the region’s population is projected to increase by 3.9%, adding about 183,000 residents. Regional growth is faster than that of the state and the nation, which are projected to grow by 0.1% and 2.6%, respectively. Over the last five years, between 2016 and 2021, the population of the region grew by 4.8%, while that state only grew by 0.8%.

Exhibit 2. Population change, in millions, Inland Empire/Desert Region, 2016-2026

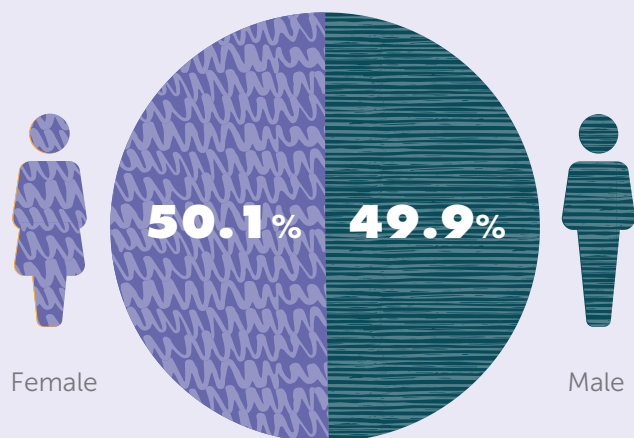


Source: Lightcast 22.2

Gender

The regional population has slightly more female (50.1%) than male (49.9%) residents (Exhibit 3). These numbers are similar to California’s gender composition in which 50.3% of residents are female and 49.7% are male.

Exhibit 3. Gender composition, Inland Empire/Desert Region, 2021



Source: Lightcast 22.2

Age

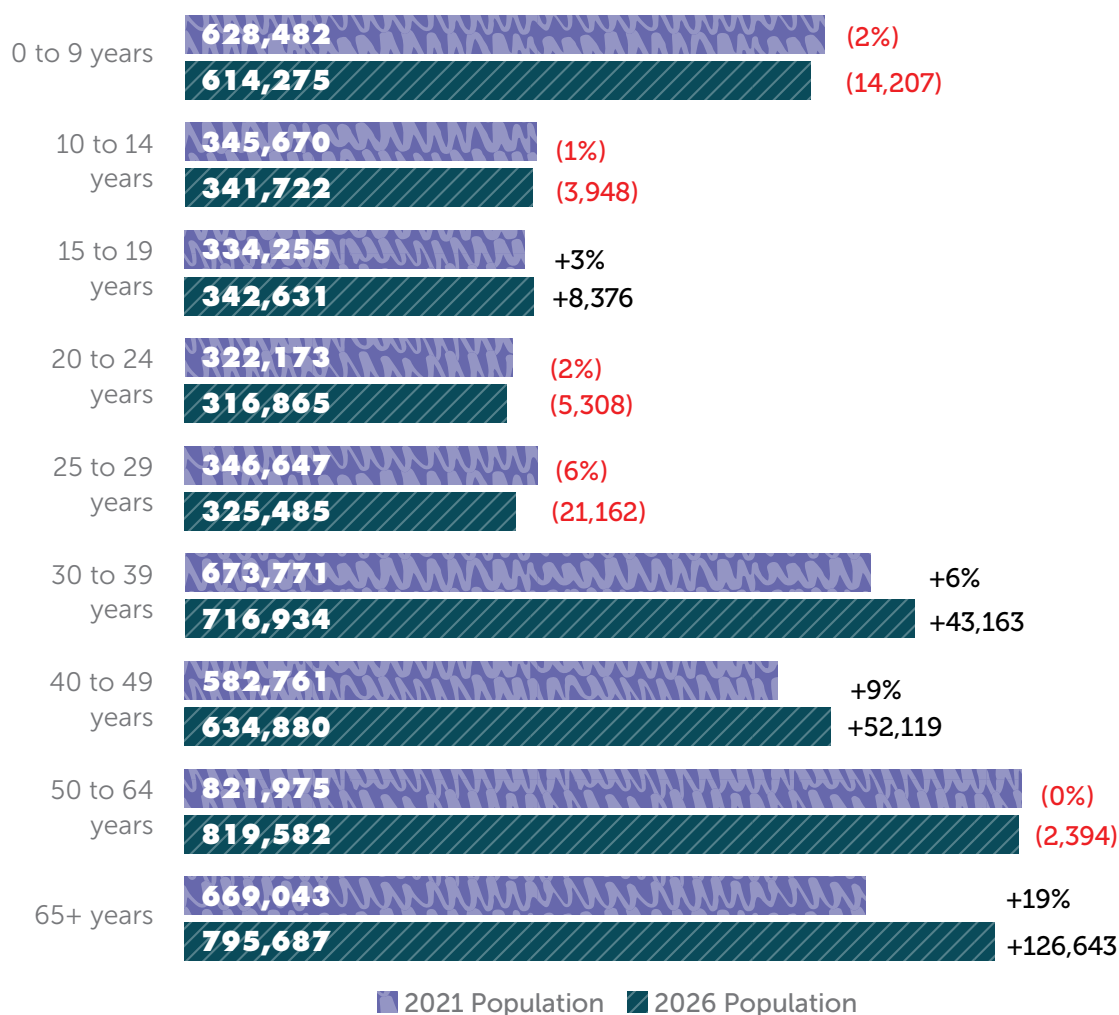
The size of resident age categories may provide insight into future demand for housing, services, and educational enrollment needs. In 2021, in the region, the median age of residents was 34.5 years, younger than California's median age of 36.5 years and the nation's median age of 38.1 years.²

In 2021, residents aged nine years and younger represented 13% of the region's population (Exhibit 4). By 2026, over the next five years, this group is projected to shrink by 2%. This may indicate a future decline in community college student enrollment within the next 20 years. The 10-to-14 age group, those who may enter college in the next six to 10 years, is expected to fall by 1% by 2026. The 15-to-19 age group, representing high school students and recent graduates, accounted for just over 7% of the population in 2021. This age group is projected to increase by 3% through 2026.

The working-age population, those residents age 25-to-64, comprised 51% of the region's population in 2021. Over the next five years, the working-age population is expected to gain about 71,700 residents, expanding by 3%. Within the working-age population, notable growth over the next five years is projected in two age groups: The 30-to-39 age group will increase by 6%, and the 40-to-49 age group will increase by 9%.

The age group comprised of residents 65 years and older is projected to rise by 19% over the next five years, adding nearly 127,000 residents. This is the fastest-growing age group in the region.

Exhibit 4. Age composition, Inland Empire/Desert Region, 2021 and 2026



Source: Lightcast 22.2

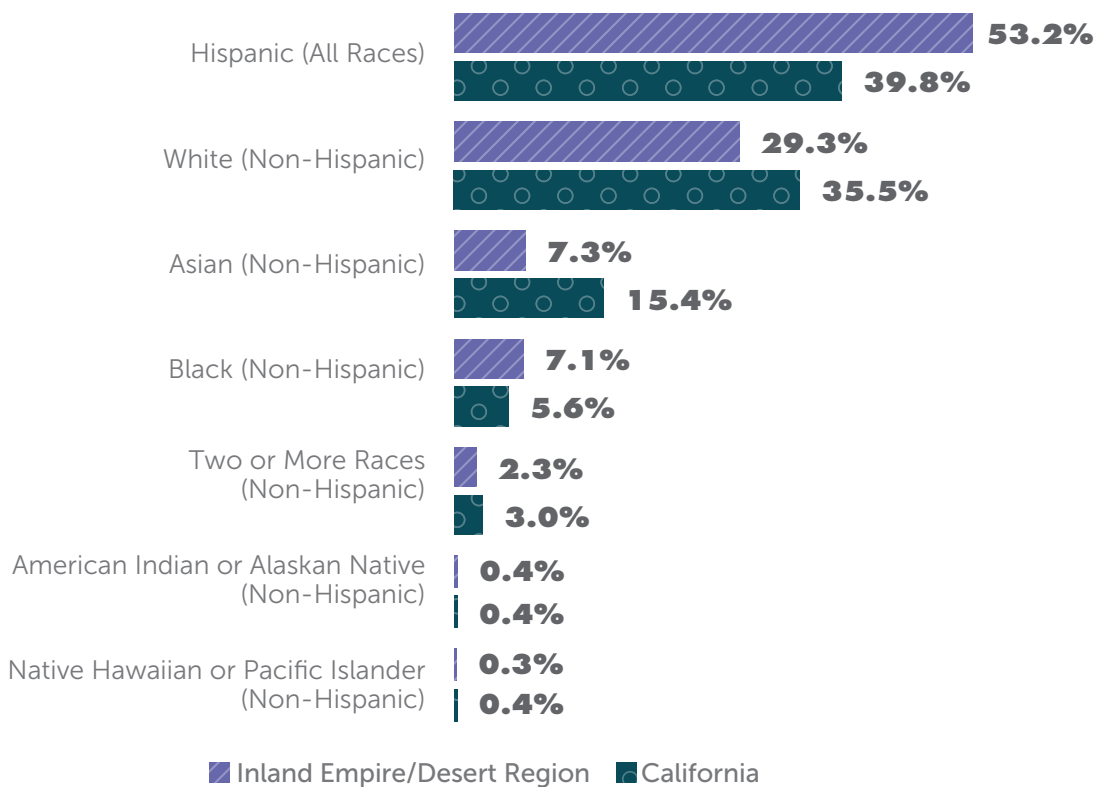
² Lightcast, "Demographic Overview," 2022, accessed August 8, 2022, <https://a.economicmodeling.com/analyst/>.

Race and Ethnicity

The U.S. Census Bureau collects race and ethnicity data from residents in accordance with the U.S. Office of Management and Budget's guidelines. The Census questionnaire asks each resident to self-identify race and Hispanic-ethnic origin categories that generally reflect their social definition and are "not an attempt to define race biologically, anthropologically, or genetically." Race and ethnicity data is particularly critical in federal and state civil rights policymaking, addressing issues such as equal employment opportunities and racial disparities in health and the environment assessments.³

In 2021, residents identifying as Hispanic (all races) made up more than half (53.2%) of the region's population, considerably more than the state's 39.8% (Exhibit 5). The region contains a larger share of Black residents than the state, 7.1% compared to 5.6%, respectively. The region contains a smaller share of Asian American residents than the state, 7.3%, compared to 15.4% in California. White residents comprise a smaller proportion of the region's population, 29.3%, compared to California, 35.5%. The regional share of American Indian or Alaskan Native and Native Hawaiian or Pacific Islander residents mirrors the statewide composition.

Exhibit 5. Race/Ethnicity Composition, Inland Empire/Desert Region and California, 2021



Source: Lightcast 22.2

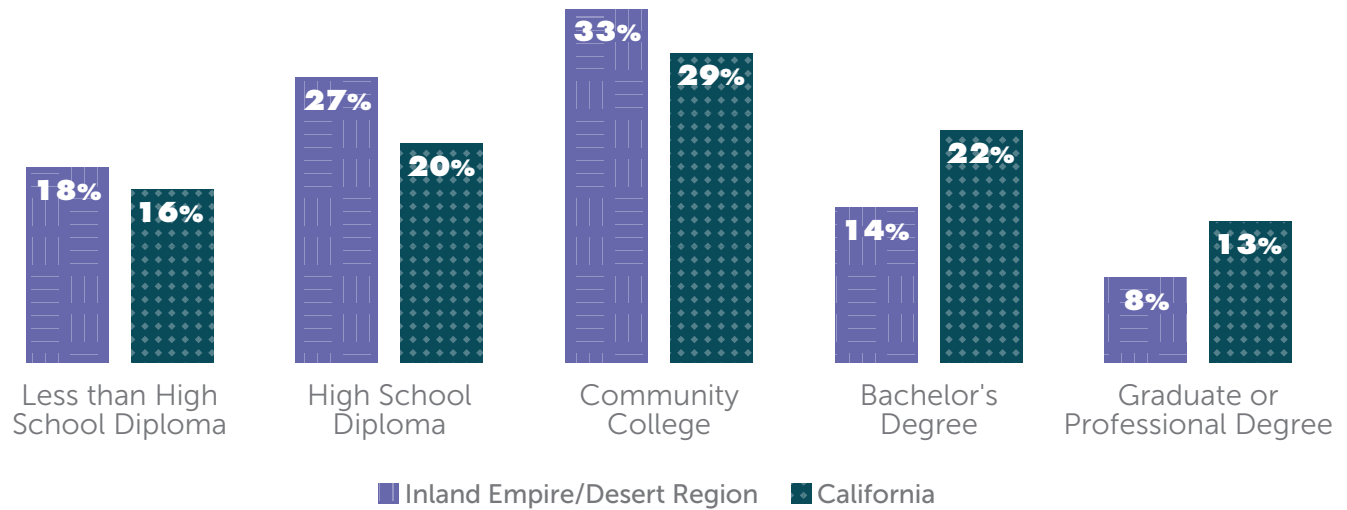
³ United States Census Bureau, "2020 Census Frequently Asked Questions About Race and Ethnicity," 2022, accessed August 8, 2022, <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/release/faqs-race-ethnicity.html>.

Educational Attainment

Educational attainment refers to the highest level of education that residents age 25 and older have completed. Educational attainment data may illuminate mismatches between resident skills and employment needs and the need for additional postsecondary program offerings in a region.

Approximately 45% of the residents in the region have a high school diploma or less, a 9% higher share than the state overall (Exhibit 6). This may indicate an opportunity for more CE program outreach with the goal of increasing educational attainment in the region. The region also has a greater share of residents with a community college education (some college but no degree, or an associate degree) 33%, than California, 29%. The region has a smaller share of residents with a bachelor's degree or higher, 22%, compared to 35% in California.

Exhibit 6. Educational attainment, Inland Empire/Desert Region and California, 2021



Source: American Community Survey

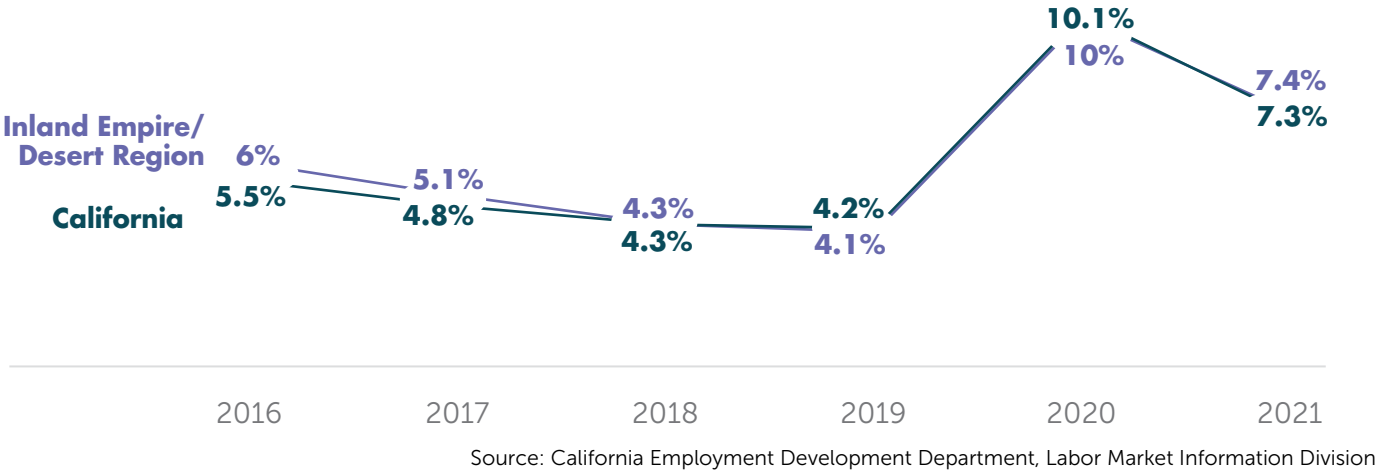


Labor Force and Unemployment Rate

Labor force data reflects the employment status of people by where they live. Labor force is the total count of residents working (employed) or seeking work (unemployed). The unemployment rate represents the number of unemployed individuals expressed as a share of the total labor force.

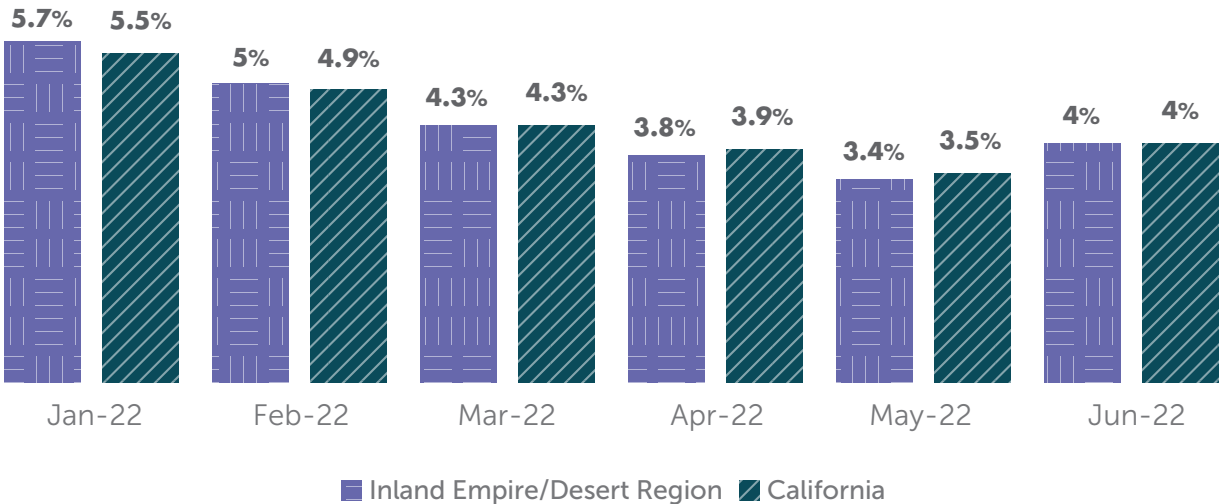
The regional annual average unemployment rate was 6% in 2016, and 118,300 residents were counted as unemployed (Exhibit 7). By 2019, the unemployment rate had fallen to 4.1%, with the number of unemployed residents dropping to 84,800. The impact of the COVID-19 pandemic dramatically increased the region’s unemployment rate to 10% in 2020, impacting 208,100 residents who were reported as unemployed. The annual average unemployment rate in the region dropped to 7.4% in 2021.

Exhibit 7. Annual average unemployment rate trend, Inland Empire/Desert Region and California, 2016-2021



In the first six months of 2022, the regional unemployment rate decreased from 5.7% in January to 4% in June (Exhibit 8). The count of unemployed residents decreased from 122,800 in January 2022 to 85,100 in June 2022, down by 37,700 individuals or 30.7%.

Exhibit 8. Year-to-date unemployment rate trend, Inland Empire/Desert Region and California, 2022



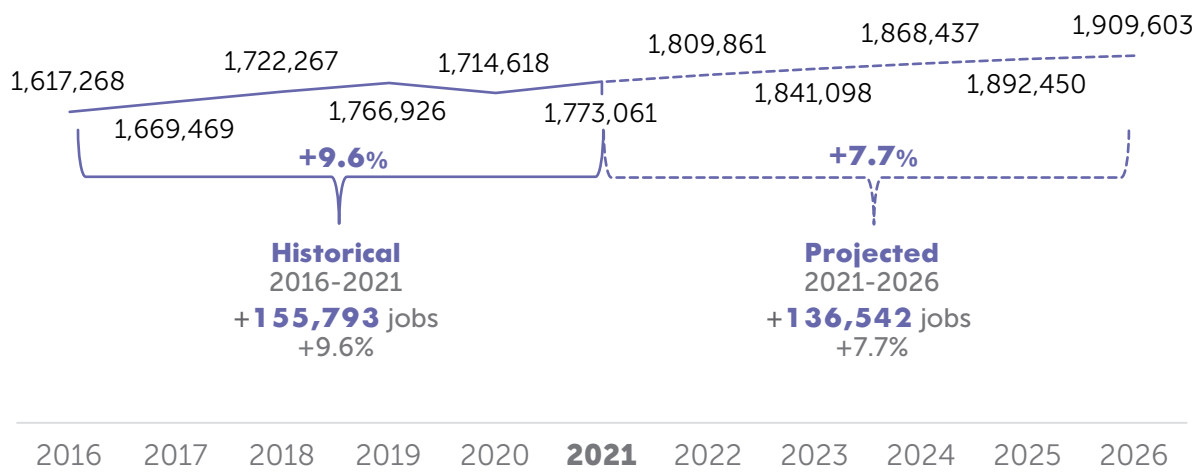
REGIONAL INDUSTRIES

Industries are groups of employer establishments categorized by their primary business activity, e.g., what they produce, sell, or the services they provide.⁴ Industries can be measured using many methods. This assessment analyzes industries by their current jobs count, job change over the next five years, average earnings per worker, and location quotient. It is important to recognize that industries are comprised of dozens of occupations that support the activity of the business, analyzed in terms of staffing patterns. Each industry employee, whether full-time and part-time, is counted across many different types of occupations, including management, maintenance workers, network administrators, analysts, and human resource assistants.

In the region, industry employers reported nearly 1.8 million total jobs in 2021, or about 9.1% of the state’s total employment (nearly 19.4 million jobs) (Exhibit 9). Over the next five years, the region’s industry employment is projected to grow by 7.7% (adding nearly 137,000 jobs), at a faster pace than the state’s projected job growth of just 3.6%. The region is projected to contribute 19.6% of the state’s net job growth over the next five years.

Over the past five years, from 2016 to 2021, regional employment rose by 9.6%, a net increase of nearly 156,000 jobs. Average employment in the region experienced a slight drop in growth in 2020 due to the effects of the COVID-19 pandemic, shedding an average of 52,300 jobs or about 3% of total employment.

Exhibit 9. Historical and projected total industry employment, Inland Empire/Desert Region, 2016-2026



Source: Lightcast 22.2



⁴ United States Census Bureau, “North American Industry Classification System (NAICS),” 2017, accessed August 8, 2022, <https://www.census.gov/naics/?58967?yearbck=2017>.

2021 Industry Employment

Employer industries are organized in a hierarchical structure known as the North American Industry Classification System (NAICS). This structure of categorization allows deeper and more detailed analysis of industry sectors and provides a better understanding of the employer activity that powers the region.

The region's 20 major industry sectors are visually displayed by their share of 2021 employment in Exhibit 10. The smallest eight sectors, by employment count, are displayed as an "Smaller Industries" category that is further disaggregated in Exhibit 11. These smaller sectors were combined to adequately demonstrate the scale and for readability purposes. The six largest major industry sectors, by job count, comprised two-thirds (66.6%) of total jobs in the region.

1. **Government, 268,873 jobs**
2. **Health Care and Social Assistance, 238,962 jobs**
3. **Transportation and Warehousing, 202,159 jobs**
4. **Retail Trade, 189,542 jobs**
5. **Construction, 141,369 jobs**
6. **Accommodation and Food Services, 140,737 jobs**

**2/3 of
regional
jobs in
2021**

Exhibit 10. Major industry employment, represented by total number of jobs, Inland Empire/Desert Region, 2021⁵

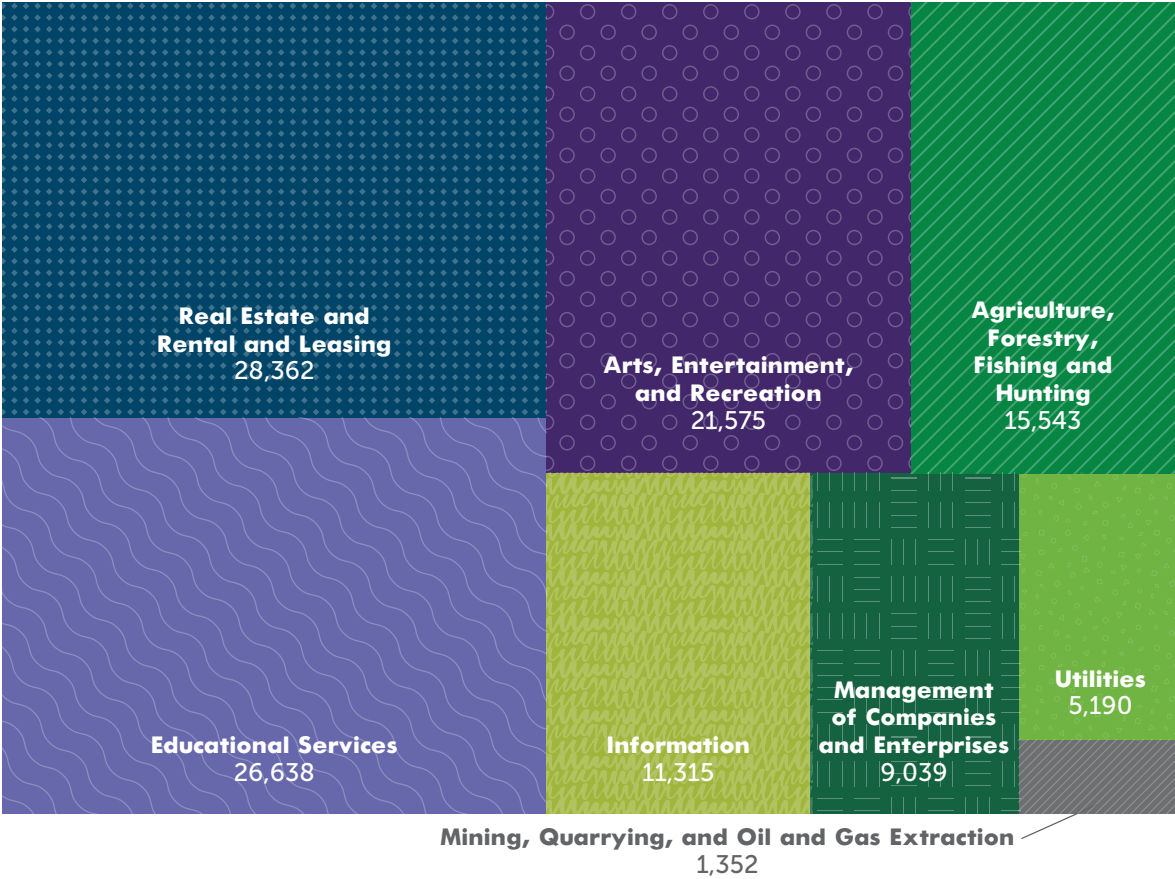


Source: Lightcast 22.2

⁵ Refer to Exhibit 11 for details on smaller industries.

Exhibit 11 provides a disaggregated view of the region’s eight smallest industry sectors by employment count. These sectors were previously displayed as an “Smaller Industries” category in Exhibit 10. The smaller industries have a combined total of more than 119,000 jobs, or nearly 7% of the region’s total employment. These diminutive industries should not be overlooked despite their total employment size. Our smallest industries, utilities and mining, quarrying and oil and gas extraction, also offer the highest average industry earnings per job. See the next section, industry average earnings per job, for further details.

Exhibit 11. Smaller major industries employment, represented by total number of jobs, Inland Empire/Desert Region, 2021



Source: Lightcast 22.2



Industry Average Earnings Per Job

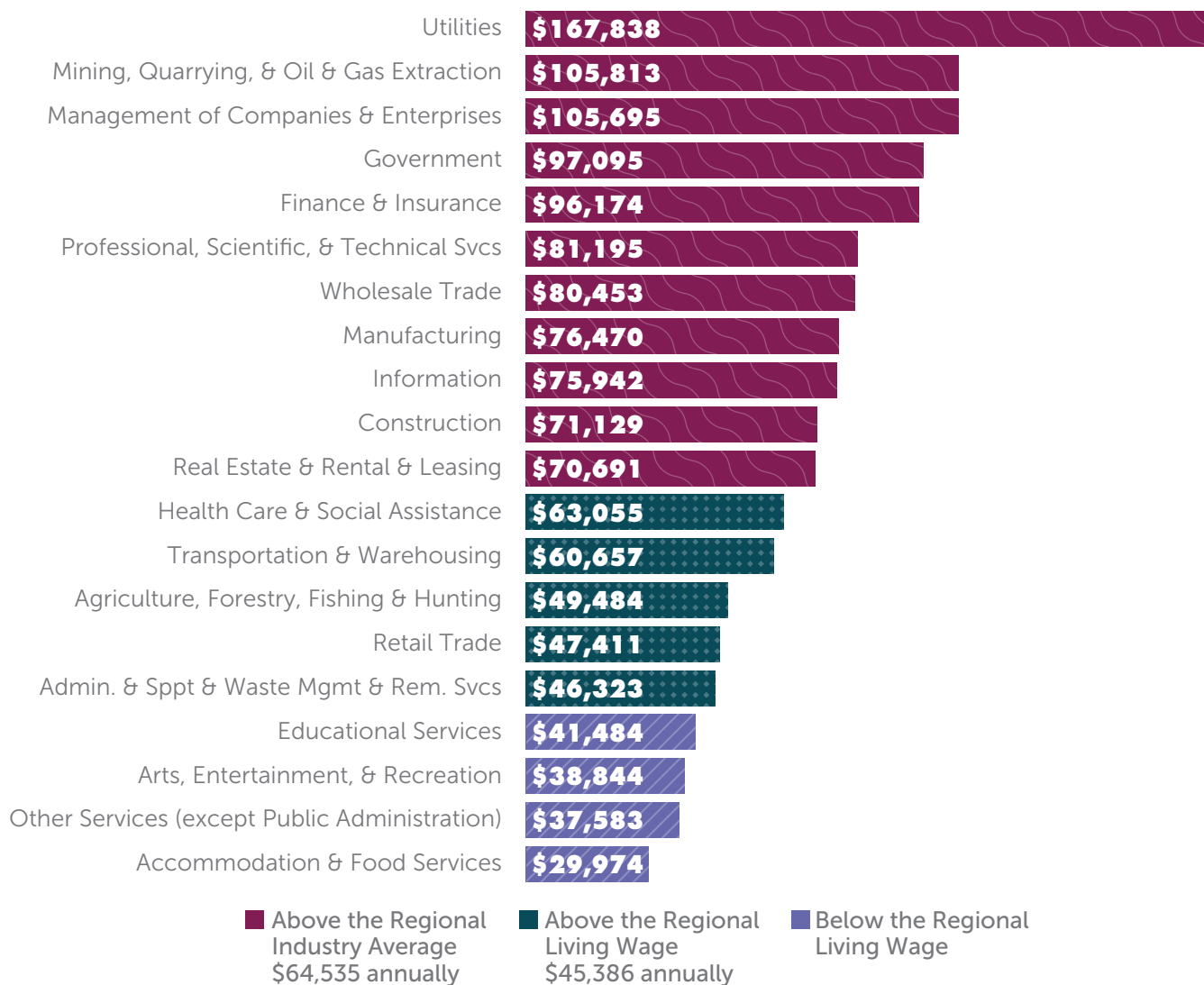
Industry average earnings per job represents pre-tax earnings from labor-related personal income, i.e., wages earned from work and not other compensation such as health insurance or other non-work value benefits. Average earnings per job represents every industry type of worker from maintenance workers or janitors to supervisory management.

Industry average earnings per job are analyzed in three categories:

- Industries that offer average earnings above the regional industry average of \$64,535 annually
- Industries that offer average earnings at or above the regional living wage standard of \$45,386 annually
- Industries that offer average earnings below the regional living wage standard of \$45,386 annually

Entering employment in a specific industry sector may not guarantee earnings that meet or exceed these earnings categories. Workers and job seekers should be aware that some industries, on average, offer higher wages than others. This is usually due to the composition of jobs and occupations they employ. Exhibit 12 displays average earnings by major industry sector.

Exhibit 12. Average earnings per job by industry sector, Inland Empire/Desert Region, 2021



Source: Lightcast 22.2

Projected Industry Growth

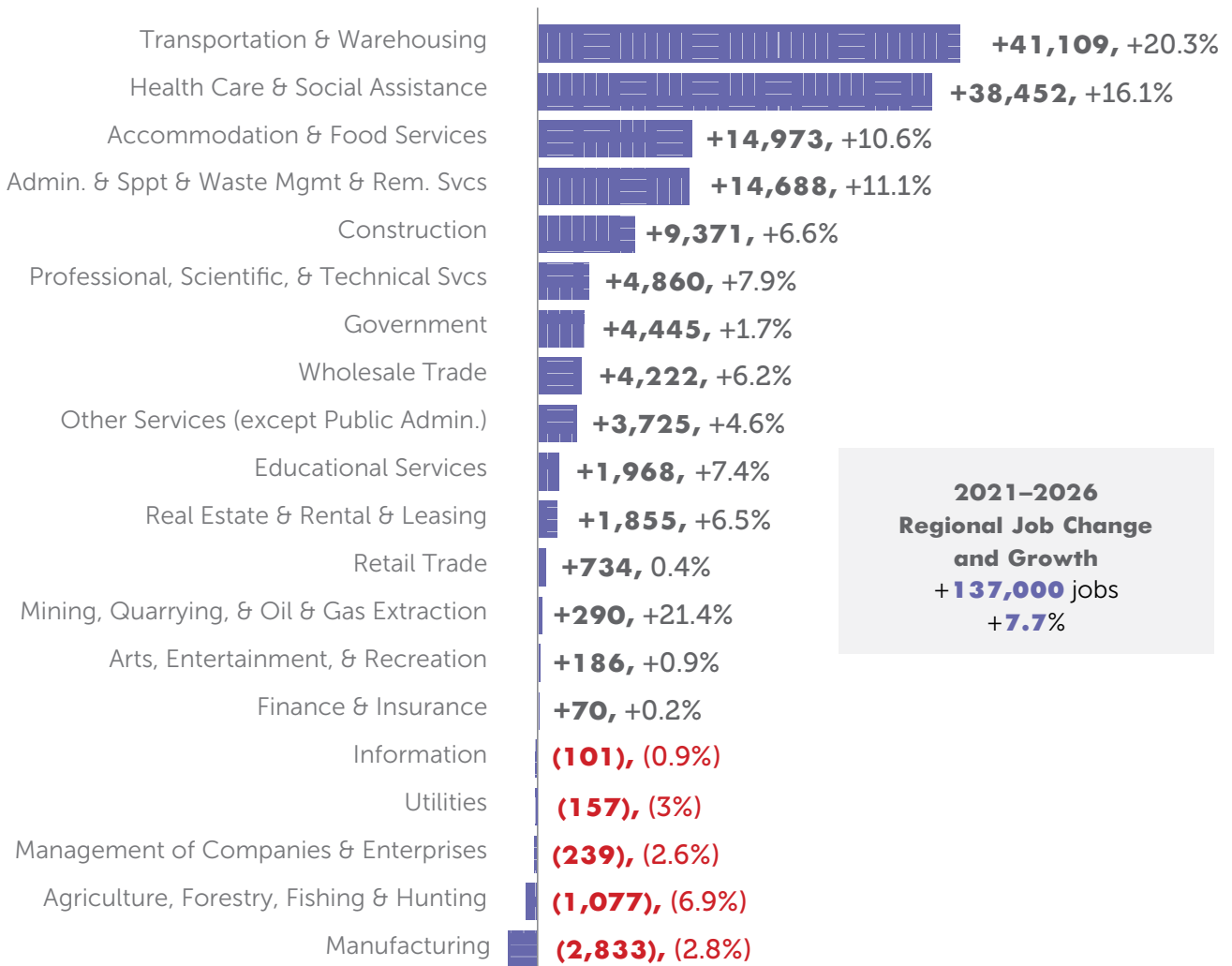
Over the next five years, regional employers are expected to increase employment by 7.7%, adding 137,000 jobs to the region. Exhibit 13 provides major industry sector change and growth trends. The mining, quarrying, and oil and gas extraction industry is projected to be the fastest growing industry sector but is only projected add 290 jobs over the next five years.

The following six major industries are projected to contribute 90% of the region's job growth. Each of these industry sectors (except construction) are projected to outpace overall regional job growth.

1. Transportation and Warehousing, +41,109 jobs, +20.3%
2. Health Care and Social Assistance, +38,452 jobs, +16.1%
3. Accommodation and Food Services, +14,973 jobs, +10.6%
4. Administrative and Support and Waste Management and Remediation Services, +14,688 jobs, +11.1%
5. Construction, +9,371 jobs, +6.6%
6. Professional, Scientific & Technical Services, +4,860 jobs, +7.9%

90% of job growth over the next five years

Exhibit 13. Industry change in employment, by number of jobs and percent growth, Inland Empire/Desert Region, 2021-2026



Source: Lightcast 22.2

Industry Groups

The previous section described the employment share of the region's major industry sectors. NAICS codes facilitate a detailed analysis of subindustries within these major sectors. This analysis provides a clearer picture of industry activity that drives that regional economy.

Exhibit 14 provides a sample of high-quality industry groups. High-quality industries are those that are growing faster than the region overall (at or above 7.7% growth), have average per job earnings above the living wage standard (\$45,386 annually), and have a location quotient at or above 1.2. Location quotient describes the concentration of an industry in an area compared to the nation overall. Highly concentrated industries often describe the type of business activity an area is "known for." The location quotient is further defined in the Appendix. Among the 18 high-quality industries identified in this analysis, eight of these are located within the transportation and warehousing sector.

In 2021, nearly 302,200 jobs were employed by industry groups that met the high-quality industry group definition. While high-quality industry groups accounted for 17% of regional employment in 2021, these industry groups are projected to add 41% of jobs over the next five years.

Exhibit 14. High-quality industry groups, Inland Empire/Desert Region, 2021-2026

Industry Groups (NAICS4)	2021 Jobs	2021-2026 Job Change	Growth Rate	Location Quotient	Average Earnings Per Job
Transportation and Warehousing					
Warehousing and Storage (4931)	118,368	28,605	24.2%	6.5	\$56,675
General Freight Trucking (4841)	29,493	3,453	11.7%	2.1	\$75,489
Couriers and Express Delivery Services (4921)	20,777	4,772	23%	2	\$52,795
Specialized Freight Trucking (4842)	7,803	1,284	16.5%	1.5	\$84,216
Freight Transportation Arrangement (4885)	4,344	854	19.6%	1.5	\$66,953
Support Activities for Air Transportation (4881)	2,928	383	13.1%	1.3	\$57,888
Other Support Activities for Transportation (4889)	1,114	126	11.3%	2.7	\$61,562
Other Pipeline Transportation (4869)	174	65	37.4%	1.9	\$138,611
Construction					
Building Equipment Contractors (2382)	34,284	3,875	11.3%	1.2	\$76,607
Foundation, Structure, and Building Exterior Contractors (2381)	27,298	2,190	8%	2.2	\$64,763
Health Care and Social Assistance					
Outpatient Care Centers (6214)	21,455	5,644	26.3%	1.8	\$103,767
Wholesale Trade					
Grocery and Related Product Merchant Wholesalers (4244)	12,119	1,477	12.2%	1.4	\$84,966
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (4237)	4,610	860	18.7%	1.5	\$79,813

Continued

Industry Groups (NAICS4)	2021 Jobs	2021-2026 Job Change	Growth Rate	Location Quotient	Average Earnings Per Job
Administrative and Support and Waste Management and Remediation Services					
Office Administrative Services (5611)	7,852	964	12.3%	1.3	\$79,552
Facilities Support Services (5612)	2,113	304	14.4%	1.2	\$81,650
Manufacturing					
Bakeries and Tortilla Manufacturing (3118)	4,190	330	7.9%	1.2	\$55,802
Grain and Oilseed Milling (3112)	799	140	17.5%	1.2	\$77,443
Real Estate and Rental and Leasing					
Automotive Equipment Rental and Leasing (5321)	2,479	526	21.2%	1.2	\$64,010

Source: Lightcast 22.2

The detailed industry groups displayed above are notable due to their growth, strong earnings, and concentration in the region compared to the nation overall. While location quotient data may provide insight into the unique presence of certain industries that may define a region, there are an additional 50 industry groups that are growing and have average earnings per job above the regional living wage standard. In 2021, industry groups that met these criteria accounted for nearly 11% of regional employment with more than 193,500 jobs. These industry groups are projected to contribute 17% of regional job growth through 2026. (The Appendix contains a list of the 50 additional industry groups that are growing and have strong earnings.)



Industry Staffing Patterns

Industries are categorized by their primary business activity. Industry employers hire workers possessing a variety of occupational knowledge, skills, and abilities to carry out the task of the business operation. Let’s use the educational services industry as an example. This industry is defined as:

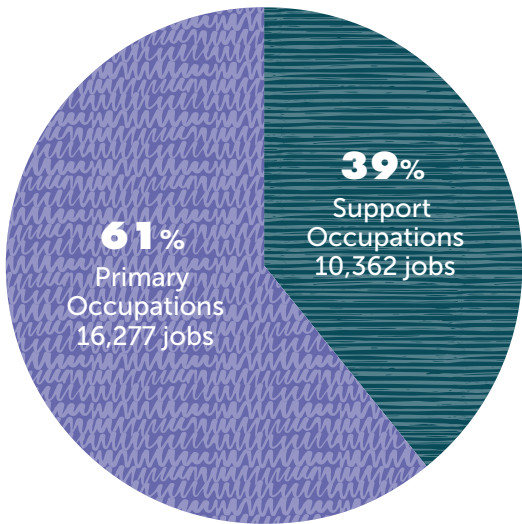
Establishments that provide instruction and training in a wide variety of subjects.⁶

When considering the types of occupations that are employed by this sector, teachers, education administrators (principals and superintendents), and other jobs related to instruction may come to mind. The “primary occupations” classification includes occupations that directly support the industry’s primary activity. In the case of educational services, jobs that provide instruction and training in a wide variety of subjects are considered the primary occupations.

There are, however, many more occupations employed in the educational services sector that support the primary activity of the industry, such as office and administrative jobs, building and grounds keeping and maintenance jobs, and computer technical support jobs. Support occupations assist primary occupations in carrying out the primary activity of a specific industry.

Of the more than 26,600 jobs in the educational services sector, 61% of the jobs are primary occupations, jobs that provide direct educational services to students, and nearly 39% are support occupations, jobs that support the primary activity of the industry (Exhibit 15). This breakdown of primary occupations versus support occupations is a staffing pattern that may be analyzed for nearly every industry, providing insight into the labor intensity of an industry’s primary activity. (Refer to the Appendix for a sample of occupations that comprise the educational services sector.)

Exhibit 15. Occupational staffing pattern for the educational services sector, showing share of primary and support occupations, Inland Empire/Desert Region, 2021



Source: Lightcast 22.2

⁶ United States Census Bureau, “North American Industry Classification System (NAICS),” 2017, accessed August 8, 2022, <https://www.census.gov/naics/?58967?yearbck=2017>.

OCCUPATIONAL OVERVIEW

An occupation is a collection of jobs, and job titles, which perform similar work tasks and share similar work knowledge, skills, and abilities. Employees who perform essentially the same tasks are classified in the same occupation, whether or not they are in the same industry. It's important to note that some occupations are concentrated in a few industries (e.g., police officers are only employed in government), whereas other occupations are found in the majority of industries (e.g., information technology workers and maintenance workers).⁷

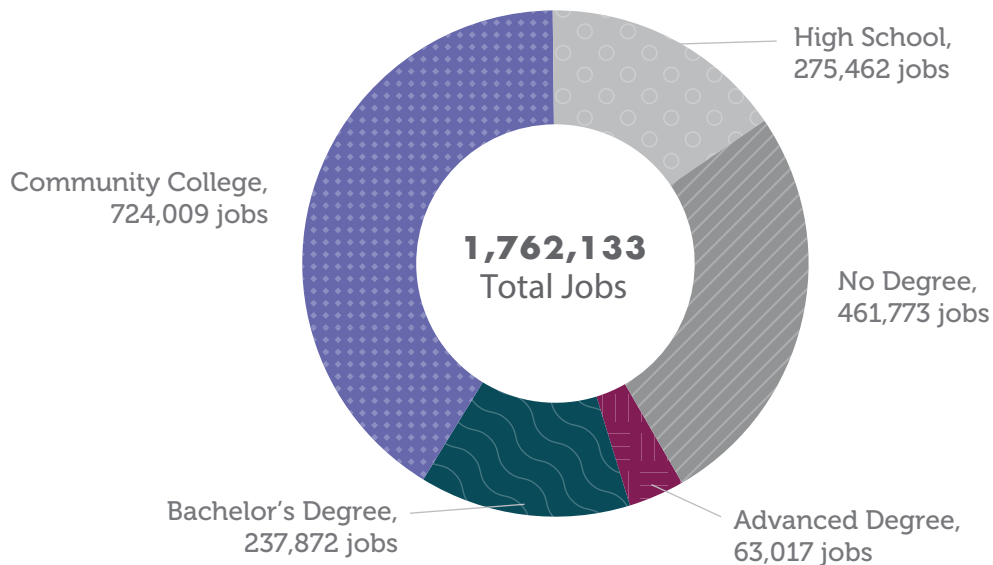
In this study, occupational employment in the region was analyzed in terms of each occupation's educational requirements, i.e., jobs requiring an entry-level education level needed to enter employment such as a high school diploma, community college coursework, a degree, or certificate, or a bachelor's degree. Typical entry-level educational requirements are reported by employers at the national level, and alternative paths to securing employment may exist depending on employer preferences and state licensing requirements. For example, registered nurses (RNs) typically must possess a bachelor's degree to enter employment in most states; however, California RN licensing may be attained after completing an Associate Degree in Nursing (ADN) through the California Community Colleges.⁸

California Community Colleges provide education and training that generally prepares workers to enter community-college-level jobs. These jobs typically require an education beyond a high school diploma but less than a four-year degree. Most community-college-level jobs offer a higher rate of pay than jobs that require less education, making them an excellent fit for community college students on a CE pathway who want to enter in-demand careers that offer a living wage.

Bachelor's-degree-level jobs are those that require a four-year degree from a college or university. These jobs were included in this report because they represent the types of jobs available to students who complete a transfer program to a four-year institution of higher education. High-school-level jobs illuminate possibilities open to those choosing to enter the workforce after securing a high school diploma or G.E.D, or jobs typically open to those who choose to work while attending college. This assessment does not include occupations that typically require an education beyond a bachelor's degree, such as physicians, lawyers, and most scientists, or occupations that do not typically require formal education to enter employment. Military occupations (about 11,000 regional military jobs in the region) were also excluded from the occupational section of this assessment. Definitions for education levels are available in the Appendix.

Of the approximately 1.8 million jobs in the region in 2021, approximately 70% of the jobs are included in this report. Exhibit 16 displays the count and share of jobs by educational level.

Exhibit 16. Count and share of jobs by education level, Inland Empire/Desert Region, 2021



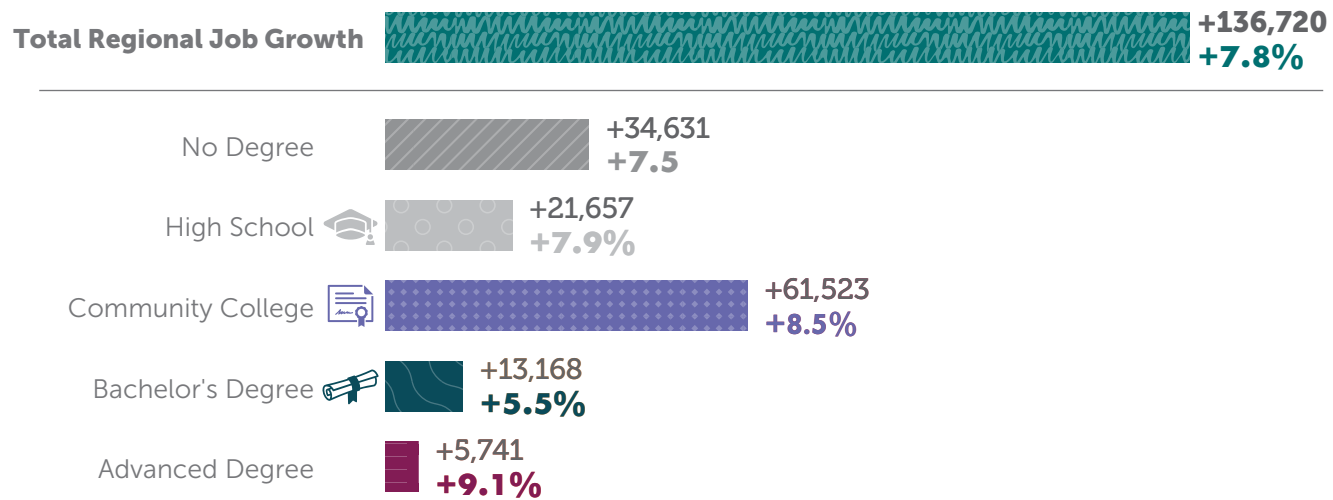
Source: COE, Lightcast 22.2

⁷ U.S. Bureau of Labor Statistics, "Concepts and Definitions," 2022, accessed on August 8, 2022, <https://www.bls.gov/cps/definitions.htm>.

⁸ California Board of Registered Nursing, "Steps to Become a California Registered Nurse," accessed on August 8, 2022, <https://www.rn.ca.gov/careers/steps.shtml>.

By 2026, regional employment is projected to expand by more than 137,000 jobs, increasing by 7.8% (Exhibit 17). Community-college-level occupations are projected to add nearly 62,000 jobs, comprising almost 45% of regional job growth. Advanced-degree-level jobs (jobs requiring education beyond a bachelor's degree) are projected to be the fastest growing group, adding approximately 5,700 jobs and increasing by 9.1%. High-school-level job growth is projected to have nearly the same rate as the region overall, around 8%.

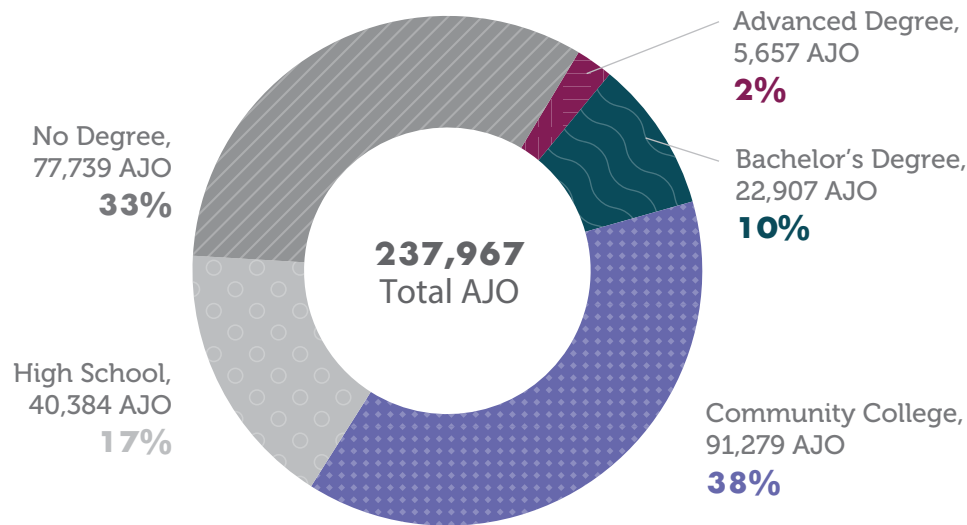
Exhibit 17. Projected job growth by education level, Inland Empire/Desert Region, 2021-2026



Source: COE, Lightcast 22.2

Beyond new job expansion, annual job openings provide insight into additional job demand when workers permanently vacate positions due to occupational transfers, promotions, or retirements. Regional employers are projected to have nearly 238,000 annual job openings for newly created positions and replacement jobs (Exhibit 18). While approximately half of these opportunities will be in the no-degree-level and high-school-level occupational groups, nearly 91,300 community-college-level job openings are projected annually through 2026. Community colleges should ensure that their training programs lead to occupations with adequate annual job openings. For this study, an occupation is considered in-demand if it has 100 annual job openings or more over the next five years in the region.

Exhibit 18. Average annual job openings (AJO) by education level, Inland Empire/Desert Region, 2021-2026



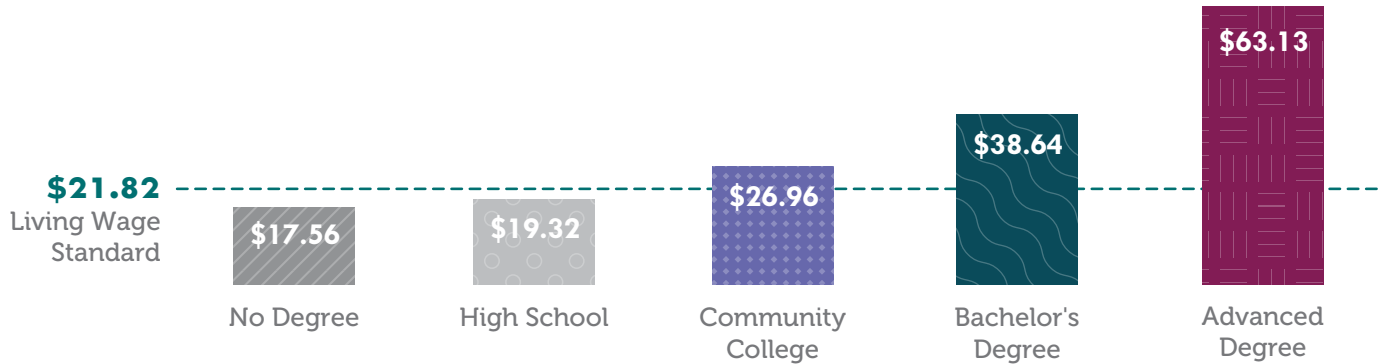
Source: COE, Lightcast 22.2

Exhibit 19 provides average hourly earnings for each grouping by education level. Occupations with higher educational requirements usually offer increased hourly earnings.⁹ Increasing educational attainment in the region may help workers access higher earnings and increase their ability to earn a living wage.

For the purposes of this study, the 2022 MIT Living Wage for California of \$21.82 per hour, or \$45,386 annually, is used as the regional living wage. The MIT Living Wage Calculator estimates the cost of living in a community or region based on typical expenses, including food, childcare, medical, housing, transportation, and taxes, to determine the minimum income needed for individuals to sustain themselves.¹⁰ The California living wage estimate is used as the regional living wage in this report because the estimated housing cost for the state aligns more closely with the 2020 median rental cost in the Inland Empire/Desert Region.¹¹

Occupations requiring a community-college-level education or higher have average hourly earnings that exceed the living wage standard for the region. Community-college-level jobs offer average hourly earnings of \$26.96 per hour, \$7.64 more (nearly \$15,900 annually) than the average hourly earnings (\$19.32 per hour) of high-school-level occupations.

Exhibit 19. Average hourly earnings by education level, Inland Empire/Desert Region, 2021



Source: COE, Lightcast 22.2



⁹ U.S. Bureau of Labor Statistics, "Education Pays, 2020," 2021, accessed on August 8, 2022, <https://www.bls.gov/careeroutlook/2021/data-on-display/education-pays.htm>.

¹⁰ MIT Living Wage, "Living Wage Calculator for California," 2022, accessed August 8, 2022, <https://livingwage.mit.edu/states/06>.

¹¹ U.S. Census Bureau, "Census Tables," 2022, accessed on August 8, 2022, https://data.census.gov/cedsci/table?t=Financial%20Characteristics%3AHousing%20Value%20and%20Purchase%20Price%3ARenter%20Costs&g=0400000US06_310XX00US40140&tid=ACSCP5Y2020.CP04.

SECTOR ANALYSIS AND PROGRAM OFFERINGS

The remainder of this report focuses on CE occupations that require the following levels of entry-level educational attainment:

- High school
- Community college
- Bachelor's degree

Occupations that fall within these education-level categories are further categorized into the 10 CCCCCO sectors and 15 CDE industry sectors. The regional analysis by sector presented in the second half of this report allows for a comprehensive evaluation of where high-quality jobs exist and where colleges can invest in career education programs to address labor market demand. To facilitate this analysis, each sector has been assigned its own report section detailing:

- Regional workforce demand and projections for high-quality occupations
- In-demand skills
- Key takeaways from job postings
- An inventory of community college programs offering training for high-quality occupations with opportunities highlighted for new program development

For each sector, occupational tables display high-quality employment opportunities, jobs that meet both high-wage and in-demand criteria and denote whether a high school diploma, community college education, or a bachelor's degree is required. Additional occupations that meet one, but not both, of these criteria can be found in the Appendix.

Current occupational employment (2021 job count), projected demand (annual job openings and growth rate), and earnings associated with occupations in each sector are included in the assessment.

An O*NET skills analysis was conducted to provide insights into the competencies needed for employment. O*NET skills are occupation-specific skills and can be classified as basic skills and cross-functional skills. Basic skills are developed capacities that facilitate learning or the more rapid acquisition of knowledge. Cross-functional skills are developed capacities that facilitate the performance of activities that occur across jobs. O*NET skills data reflects the skills historically required for occupational employment.

Additionally, the economic modeling firm and job posting aggregator Lightcast provides real-time insight into skills sought by employers posting job advertisements. Skills can be classified as specialized or soft skills. Specialized skills are occupation-specific skills that employers request for industry or job competency. Soft skills are foundational skills that transcend industries and occupations.

A program inventory study was conducted for each CCCCCO sector, examining each college with related programs that align with CDE sectors. The CDE developed Career Education (CE) Model Curriculum Standards for grades 7 through 12 that categorize courses and programs into 15 industry sectors. The CE model sectors are not to be confused with the NAICS employment industry sectors discussed in the previous section of this report or with the CCCCCO sectors. The CE model provides a useful way to classify postsecondary CE offerings and connect career pathways from high school to college. The relationship between the CDE and CCCCCO sectors is illustrated in Exhibit 20. Additional information on program offerings can be found in the Appendix.

Exhibit 20. Crosswalk showing CCCCCO priority and emerging sectors alignment with CDE industry sectors

CCCCCO Priority and Emerging Sectors		CDE Industry Sectors	
	Advanced Manufacturing	Manufacturing and Product Development	
	Advanced Transportation & Logistics	Transportation	
	Agriculture, Water & Environmental Technologies	Agriculture and Natural Resources	
	Business & Entrepreneurship	Business and Finance	
		Marketing, Sales, and Services	
	Education & Human Development	Education, Child Development, and Family Services	
	Energy, Construction & Utilities	Building and Construction Trades	
		Energy, Environment, and Utilities	
		Engineering and Architecture	
	Health	Health Science and Medical Technology	
	Information & Communication Technologies (ICT)/Digital Media	Arts, Media, and Entertainment	
		Information and Communication Technologies	
	Public Safety	Public Services	
	Retail, Hospitality & Tourism	Fashion and Interior Design	
		Hospitality, Tourism, and Recreation	

Source: CCCCCO, CDE, COE

Inland Empire/Desert community colleges currently offer programs in each of the 10 CCCCCO and 15 CDE sectors. The following sections display current program offerings, high-quality occupations related to regional training programs, skills data, job ad information, and programs not currently offered at the regional colleges, separated by industry sector.

In 2021, regional community college programs prepared students for employment in nearly 393,400 high-quality jobs, of which, approximately 64% (253,400 jobs) were community-college-level. The high-quality community-college-level occupations trained by regional programs are projected to have nearly 27,100 annual job openings. Through the expansion of program offerings, the colleges could prepare students for an additional 8,500 community-college-level annual job openings.



ADVANCED MANUFACTURING

The advanced manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. This sector includes traditional manufacturing work in addition to jobs and careers dedicated to customization, scalability, and technologies that improve the entire manufacturing process (NAICS, 2017).

Eight regional community colleges currently offer programs that prepare students for employment in the manufacturing sector. Manufacturing programs aim to equip students with workplace skills that will secure employment in positions with self-sustainable wages.

Manufacturing and Product Development

The CCCC advanced manufacturing sector aligns with the CDE manufacturing and product development sector. Regional advanced manufacturing programs utilize nine program codes.

Programs Offered

- 0699.00 – Other Media and Communications
- 0934.00 – Electronics and Electric Technology
- 0935.00 – Electro-Mechanical Technology
- 0945.00 – Industrial Systems Technology and Maintenance
- 0953.30 – Electrical, Electronic, and Electro-Mechanical Drafting
- 0953.40 – Mechanical Drafting
- 0956.00 – Manufacturing and Industrial Technology
- 0956.30 – Machining and Machine Tools
- 0956.50 – Welding Technology

There are five high-quality occupations in advanced manufacturing. Two of the high-quality manufacturing occupations require a community college education, and three manufacturing occupations require a bachelor's degree. In 2021, there were nearly 7,800 community-college-level jobs and more than 4,500 bachelor's-degree-level jobs. Employment for community-college-level occupations is projected to grow by 4.9% through 2026, with more than 800 annual job openings. Over the next five years, more than 300 annual job openings are projected for bachelor's-degree-level occupations, increasing employment by 5.3%.

Exhibit 21. High-quality community-college-level advanced manufacturing occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
First-Line Supervisors of Production and Operating Workers	4,915	2%	500	\$30.05
Industrial Machinery Mechanics	2,884	11%	317	\$30.61

Source: Lightcast 22.2

Exhibit 22. High-quality bachelor's-degree-level advanced manufacturing occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Industrial Engineers	1,579	8%	127	\$38.57
Industrial Production Managers	1,547	1%	109	\$47.37
Mechanical Engineers	1,421	7%	104	\$42.14

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for occupations in the advanced manufacturing sector than occupations in other sectors.

- **Equipment Maintenance:** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- **Equipment Selection:** Determining the kind of tools and equipment needed to do a job.
- **Operations Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
- **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

High-Quality Manufacturing and Product Development Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 3,500 job ads were posted for high-quality advanced manufacturing occupations. Between 2016 and 2021, ads for high-quality manufacturing occupations increased by 129%. Below are highlights from a high-quality manufacturing job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Mauser Packaging Solutions • YRC Freight • Ryder Systems, Inc. • Niagara Bottling, LLC. 	Most Common Job Titles <ul style="list-style-type: none"> • Production Supervisor • Maintenance Mechanic • Production Manager • Quality Manager
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Repair • Scheduling • Quality Assurance and Control • Machinery • Process Improvement 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Problem Solving • Planning • Teamwork/Collaboration • Physical Abilities

According to the Center of Excellence (COE) business list, the largest employers in the manufacturing sector, by employee count, are Collins Aerospace, Dart Container Corporation, and Fender Musical Instruments.

There are 14 advanced manufacturing programs that regional community colleges do not currently offer. However, these programs do not train additional occupations that meet the high-demand and high-wage criteria for high-quality employment opportunities.

- 0934.20 – Industrial Electronics
- 0934.80 – Laser and Optical Technology
- 0935.10 – Appliance Repair
- 0936.00 – Printing and Lithography
- 0943.00 – Instrumentation Technology
- 0943.30 – Vacuum Technology
- 0953.60 – Technical Illustration
- 0954.20 – Plastics and Composites
- 0954.30 – Petroleum Technology
- 0956.70 – Industrial and Occupational Safety and Health
- 0956.80 – Industrial Quality Control
- 0957.30 – Surveying
- 0961.00 – Optics
- 1920.00 – Ocean Technology



ADVANCED TRANSPORTATION & LOGISTICS

The advanced transportation & logistics sector includes businesses providing transportation of passengers and cargo, warehousing and storage for goods, and support activities related to modes of transportation. The modes of transportation are air, rail, water, road, and pipeline. Support activities include the routine repair and maintenance of transportation equipment, such as aircraft, railroad rolling stock, cars, trucks, and ships. Many establishments in this sector often operate on networks with physical facilities, labor forces, and equipment spread over an extensive geographic area (NAICS, 2017).

Transportation

Ten regional community colleges currently offer programs that train students for employment in the transportation sector. Regional transportation programs utilize 14 program codes.

Programs Offered

- 0510.00 – Logistics and Materials Transportation
- 0947.00 – Diesel Technology
- 0948.00 – Automotive Technology
- 0948.40 – Alternative Fuels and Advanced Transportation Technology
- 0949.00 – Automotive Collision Repair
- 0949.10 – Upholstery Repair - Automotive
- 0950.00 – Aeronautical and Aviation Technology
- 0950.10 – Aviation Airframe Mechanics
- 0950.20 – Aviation Powerplant Mechanics
- 0950.40 – Aircraft Electronics (Avionics)
- 0950.50 – Aircraft Fabrication
- 3020.00 – Aviation and Airport Management and Services
- 3020.10 – Aviation and Airport Management
- 3020.20 – Piloting

There are nine high-quality occupations in the advanced transportation sector, accounting for nearly 66,800 jobs in 2021. All the high-quality occupations in this sector require a community college education. Employment for high-quality transportation occupations is projected to increase by 13% through 2026, with nearly 9,100 annual job openings.

Regional community colleges currently provide training programs related to eight of the nine high-quality transportation occupations which are displayed in Exhibit 23. In 2021, there were nearly 32,500 high-quality jobs related to transportation training programs. These occupations are projected to grow by 12%, with nearly 4,100 annual job openings.



Exhibit 23. High-quality community-college-level advanced transportation occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	9,982	16%	1,472	\$28.42
Production, Planning, and Expediting Clerks	5,071	10%	636	\$23.01
First-Line Supervisors of Mechanics, Installers, and Repairers	4,899	7%	517	\$38.43
Bus and Truck Mechanics and Diesel Engine Specialists	4,356	10%	503	\$23.89
Transportation, Storage, and Distribution Managers	2,741	16%	310	\$44.44
Mobile Heavy Equipment Mechanics, Except Engines	2,144	9%	256	\$30.33
Logisticians	1,599	19%	213	\$38.42
Aircraft Mechanics and Service Technicians	1,694	6%	164	\$35.23

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for occupations in the advanced transportation sector than occupations in other sectors.

- **Operation and Control:** Controlling operations of equipment or systems.
- **Operations Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
- **Repairing:** Repairing machines or systems using the needed tools.
- **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.

High-Quality Advanced Transportation Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 22,000 job ads were posted for high-quality advanced transportation occupations. Between 2016 and 2021, ads for high-quality transportation occupations increased by 211%. Below are highlights from a high-quality transportation job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Marten Transport • YRC Freight • Reddaway Trucking • Penske 	Most Common Job Titles <ul style="list-style-type: none"> • CDL A Truck Driver • Warehouse Supervisor • Diesel Mechanic • Maintenance Supervisor
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Scheduling • Repair • Commercial Driving • Customer Service • Logistics 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Physical Abilities • Communication Skills • Teamwork/Collaboration • Problem Solving • Organizational Skills

According to the Center of Excellence (COE) business list, the largest employers in the transportation sector, by employee count, are Ontario International Airport, Amazon, FedEx, and YRC Freight.

There are eight transportation programs that regional community colleges do not currently offer.

- 0947.20 – Heavy Equipment Maintenance
- 0947.30 – Heavy Equipment Operation
- 0947.40 – Railroad and Light Rail Operations
- 0947.50 – Truck and Bus Driving
- 0948.30 – Motorcycle, Outboard, and Small Engine Repair
- 0948.50 – Recreational Vehicle Service
- 0959.00 – Marine Technology
- 3020.30 – Air Traffic Control

Regional community colleges do not provide training for one high-quality occupation: heavy and tractor-trailer truck drivers. In 2021, more than half (51%) of the total high-quality transportation jobs in the region were for heavy and tractor-trailer truck drivers. This occupation is trained by truck and bus driving programs (TOP 0947.50).

Exhibit 24. High-quality community-college-level transportation occupation without a regional training program

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Heavy and Tractor-Trailer Truck Drivers	34,289	14%	4,978	\$23.91

Source: Lightcast 22.2





AGRICULTURE, WATER, & ENVIRONMENTAL TECHNOLOGIES

The agriculture, water, & environmental technologies sector is more than just agricultural production. Programs in this sector are varied, addressing subjects such as animal science, agricultural wholesale trade, environmental services, and veterinary services. This sector aligns with the CDE agriculture and natural resources sector.

Agriculture and Natural Resources

Four regional community colleges currently offer eight programs that prepare students for employment in the agriculture, water, & environmental technologies sector.

Programs Offered

- 0101.00 – Agriculture Technology and Sciences, General
- 0102.00 – Animal Science
- 0102.40 – Equine Science
- 0103.00 – Plant Science
- 0109.00 – Horticulture
- 0109.40 – Turfgrass Technology
- 0112.00 – Agriculture Business, Sales and Service
- 0115.00 – Natural Resources

There are two high-quality agriculture, water, & environmental technologies occupations. One occupation requires a high school education; the other, a community college education. In 2021, there were nearly 3,500 high-quality jobs in this sector. Employment for pest control workers (the high-school-level occupation) is projected to increase by 6%, with nearly 200 annual job openings. Employment for the community-college-level occupation is projected to grow by 3% through 2026, with nearly 300 annual job openings.

Exhibit 25. High-quality high-school-level agriculture, water, & environmental technologies occupation related to regional training programs

High-School-Level Occupation	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Pest Control Workers	1,252	6%	186	\$24.07

Source: Lightcast 22.2

Exhibit 26. High-quality community-college-level agriculture, water, & environmental technologies occupation related to regional training programs

Community-College-Level Occupation	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	2,236	3%	256	\$23.38

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for occupations in the agriculture, water, & environmental technologies sector than occupations in other sectors.

- **Management of Material Resources:** Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.

High-Quality Agriculture, Water, & Environmental Technologies Job Advertisements

Over the last 12 months, June 2021 through May 2022, more than 700 job ads were posted for high-quality agriculture, water, & environmental technologies occupations. Approximately 91% of regional ads were posted for pest control workers. Between 2016 and 2021, ads for high-quality agriculture, water, & environmental technologies occupations increased by 279%. Below are highlights from a high-quality agriculture and natural resources job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Hawx Services, LLC • Orkin Incorporated • Rollins Inc. • Rentokil North America 	Most Common Job Titles <ul style="list-style-type: none"> • Pest Control Technician/Specialist • Commercial Pest Control Technician • Pest Control Service Professional • Termite Specialist • Exterminator
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Customer Service/Contact • Customer Billing • Basic Mathematics/Calculation • Scheduling • Customer Complaint Resolution 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Problem Solving • Writing • Verbal/Oral Communication • Teamwork/Collaboration

According to the Center of Excellence (COE) business list, the largest employers in the agriculture, water, & environmental technologies sector, by employee count, are Lloyd Pest & Termite Control, Brightview Landscape Services, Oasis Date Gardens, Golden Acre Farms, and Desert Concepts Landscaping.

There are 14 agriculture, water, & environmental technologies programs that regional community colleges do not currently offer. However, these programs do not train for additional occupations that meet the high-demand and high-wage criteria for high-quality employment opportunities.

- 0102.10 – Veterinary Technician (Licensed)
- 0102.20 – Artificial Inseminator
- 0102.30 – Dairy Science
- 0103.10 – Agricultural Pest Control Advisor and Operator
- 0104.00 – Viticulture, Enology, and Wine Business
- 0109.10 – Landscape Design and Maintenance
- 0109.20 – Floriculture - Floristry
- 0109.30 – Nursery Technology
- 0113.00 – Food Processing and Related Technologies
- 0114.00 – Forestry
- 0115.10 – Parks and Outdoor Recreation
- 0115.20 – Wildlife and Fisheries
- 0116.00 – Agricultural Power Equipment Technology
- 0199.00 – Other Agriculture and Natural Resources



BUSINESS & ENTREPRENEURSHIP

Community college business & entrepreneurship programs provide skills that span industries engaged in the private and public sectors. This sector may be considered a catch-all for a variety of activities that span multiple industries. For example, accountants and management skills are necessary for nearly every business, public and private. This sector aligns with the CDE business and finance and marketing, sales, and services sectors.

Business and Finance

All regional community colleges offer business & entrepreneurship programs related to business and finance, utilizing 15 program codes.

Programs Offered

- 0501.00 – Business and Commerce, General
- 0502.00 – Accounting
- 0502.10 – Tax Studies
- 0504.00 – Banking and Finance
- 0505.00 – Business Administration
- 0506.00 – Business Management
- 0506.30 – Management Development and Supervision
- 0506.40 – Small Business and Entrepreneurship
- 0506.50 – Retail Store Operations and Management
- 0508.00 – International Business and Trade
- 0509.70 – E-Commerce (Business emphasis)
- 0514.00 – Office Technology/Office Computer Applications
- 0514.40 – Office Management
- 0599.00 – Other Business and Management
- 1301.10 – Consumer Services

There are 18 high-quality occupations in the business & entrepreneurship sector related to business and finance, accounting for nearly 90,200 jobs in 2021. One occupation requires a high school education, nine occupations require a community college education, and eight occupations require a bachelor's degree. Employment for high-quality business and finance occupations is projected to increase by 5% through 2026, with nearly 9,200 annual job openings.

Regional community colleges currently provide training programs related to 17 of the 18 high-quality business & entrepreneurship occupations. In 2021, there were nearly 88,600 high-quality jobs related to business & entrepreneurship training programs. These occupations are projected to grow by 5%, with almost 9,100 annual job openings projected. Approximately 58% of the projected job openings for high-quality business & entrepreneurship jobs are for community-college-level occupations.

Exhibit 27. High-quality high-school-level business and finance occupation related to regional training programs

High-School-Level Occupation	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Insurance Claims and Policy Processing Clerks	2,180	0%	209	\$21.82

Source: Lightcast 22.2

Exhibit 28. High-quality community-college-level business and finance occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
General and Operations Managers	19,499	9%	2,009	\$47.41
First-Line Supervisors of Office and Administrative Support Workers	15,737	4%	1,717	\$28.33
Executive Secretaries and Executive Administrative Assistants	3,620	(4%)	382	\$31.51
Buyers and Purchasing Agents	3,525	1%	351	\$27.95
First-Line Supervisors of Non-Retail Sales Workers	3,251	0%	306	\$26.39
Administrative Services and Facilities Managers	2,921	7%	289	\$47.05
Payroll and Timekeeping Clerks	1,737	(2%)	176	\$23.71
Human Resources Assistants, Except Payroll and Timekeeping	1,232	4%	135	\$22.05

Source: Lightcast 22.2

Exhibit 29. High-quality bachelor's-degree-level business and finance occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Accountants and Auditors	8,538	7%	893	\$34.84
Management Analysts	7,265	7%	785	\$38.48
Human Resources Specialists	5,913	11%	711	\$30.96
Financial Managers	5,103	8%	458	\$54.29
Chief Executives	2,846	3%	218	\$76.31
Loan Officers	2,212	(5%)	165	\$33.03
Personal Financial Advisors	1,630	4%	133	\$36.91
Human Resources Managers	1,378	6%	132	\$54.16

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for business and finance occupations in the business & entrepreneurship sector than occupations in other sectors.

- **Management of Financial Resources:** Determining how money will be spent to get the work done, and accounting for these expenditures.
- **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.
- **Mathematics:** Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- **Negotiation:** Bringing others together and trying to reconcile differences.
- **Persuasion:** Persuading others to change their minds or behavior.
- **Reading Comprehension:** Understanding written sentences and paragraphs in work-related documents.
- **Speaking:** Talking to others to convey information effectively.
- **Time Management:** Managing one's own time and the time of others.
- **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

High-Quality Business and Finance Job Advertisements

Over the last 12 months, June 2021 through May 2022, more than 19,100 job ads were posted for high-quality business and finance occupations in the business & entrepreneurship sector. Between 2016 and 2021, ads for high-quality business and finance occupations increased by 148%. Below are highlights from a high-quality business and finance job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Anthem Blue Cross • Bank of America • University of California, Riverside • Riverside County • Yaamava' Resort & Casino at San 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Organizational Skills • Planning • Problem Solving • Teamwork/Collaboration
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Scheduling • Budgeting • Customer Service • Accounting • Staff Management 	Most Common Job Titles <ul style="list-style-type: none"> • Operations Manager/Supervisor • Human Resources Generalist • General Manager • Human Resources Manager • Office Manager

According to the Center of Excellence (COE) business list, the largest employers in the business & entrepreneurship sector, by employee count, are Inland Empire Health Plan, Target, and Mercury Insurance.

There are five programs related to business and finance that regional community colleges do not currently offer.

- 0509.20 – Purchasing
- 0512.00 – Insurance
- 0514.10 – Legal Office Technology
- 0516.00 – Labor and Industrial Relations
- 3005.00 – Custodial Services

Regional community colleges business & entrepreneurship programs do not provide training for one high-quality occupation: claims adjusters, examiners, and investigators. In 2021, there were almost 1,600 claims adjuster, examiner, and investigator jobs in the region. While employment for this occupation is projected to decline by 2% through 2026, claims adjusters, examiners, and investigators earn a high median hourly wage, and more than 100 annual job openings are projected. Claims adjusters, examiners, and investigators are trained by insurance programs (TOP 0512.00).

Exhibit 30. High-quality community-college-level business and finance occupation without a regional training program

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Claims Adjusters, Examiners, and Investigators	1,570	(2%)	121	\$38.95

Source: Lightcast 22.2

Marketing, Sales, and Services

Nine regional community colleges currently offer business & entrepreneurship programs related to marketing, sales, and services, utilizing six program codes.

Programs Offered

- 0509.00 – Marketing and Distribution
- 0509.40 – Sales and Salesmanship
- 0511.00 – Real Estate
- 0511.10 – Escrow
- 0518.00 – Customer Service
- 0610.00 – Mass Communications

There are 12 high-quality marketing, sales, and services occupations in the business & entrepreneurship sector. Six of the occupations require a community college education, and six require a bachelor's degree. In 2021, there were nearly 36,700 community-college-level jobs and more than 16,500 bachelor's-degree-level jobs in the region.

Employment for community-college-level occupations is projected to grow by 7%, with more than 4,100 job openings available annually through 2026. Bachelor's-degree-level occupations are projected to have more than 1,700 annual job openings, growing by 6% over the next five years.

Exhibit 31. High-quality community-college-level marketing, sales, and services occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	12,822	6%	1,449	\$28.62
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	8,081	7%	1,064	\$23.32
Insurance Sales Agents	5,174	10%	584	\$22.23
Real Estate Sales Agents	5,149	5%	510	\$28.32
Property, Real Estate, and Community Association Managers	3,732	4%	323	\$32.16
Real Estate Brokers	1,730	6%	172	\$33.02

Source: Lightcast 22.2

Exhibit 32. High-quality bachelor's-degree-level marketing, sales, and services occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Market Research Analysts and Marketing Specialists	4,391	12%	558	\$25.36
Sales Managers	4,811	4%	447	\$46.52
Securities, Commodities, and Financial Services Sales Agents	3,366	0%	293	\$25.93
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1,389	5%	156	\$41.90
Public Relations Specialists	1,308	7%	141	\$29.30
Marketing Managers	1,256	8%	127	\$49.83

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for marketing, sales, and services occupations in the business & entrepreneurship sector than occupations in other sectors.

- **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Coordination:** Adjusting actions in relation to others' actions.
- **Management of Financial Resources:** Determining how money will be spent to get the work done, and accounting for these expenditures.
- **Negotiation:** Bringing others together and trying to reconcile differences.
- **Persuasion:** Persuading others to change their minds or behavior.
- **Service Orientation:** Actively looking for ways to help people.
- **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
- **Speaking:** Talking to others to convey information effectively.

High-Quality Marketing, Sales, and Services Job Advertisements

Over the last 12 months, June 2021 through May 2022, more than 21,300 job ads were posted for high-quality marketing, sales, and services occupations in the business & entrepreneurship sector. Between 2016 and 2021, ads for these occupations increased by 220%. Below are highlights from a high-quality marketing, sales, and services job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Charter Communications • Anthem Blue Cross • Assurance Agency • State Farm Insurance • E-homes 	Most Common Job Titles <ul style="list-style-type: none"> • Sales Representative • Inside/Outside Sales Representative • Account Executive • Account Manager • Leasing Consultant
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Sales • Customer Service/Contact • Sales Goals • Prospective Clients • Product Sales 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Organizational Skills • Teamwork/Collaboration • Building Effective Relationships • Problem Solving

According to the Center of Excellence (COE) business list, the largest marketing, sales, and services employers, by employee count, are Starcrest Products of California, JC Penny, and Valley View Mortgage.

There are three marketing, sales, and services programs that regional community colleges do not currently offer. However, these programs do not train for additional occupations that meet the high-demand and high-wage criteria for high-quality employment opportunities.

- 0509.10 – Advertising
- 0509.60 – Display
- 0606.00 – Public Relations



EDUCATION & HUMAN DEVELOPMENT

Education & human development programs make a positive difference in the lives of young children. Professionals who follow this path tend to be good communicators with the ability to empathize with people from diverse backgrounds. This sector aligns with the CDE education, child development, and family services sector.

Education, Child Development, and Family Services

All community colleges in the region currently offer education & human development programs, utilizing 15 program codes.

Programs Offered

- 0802.00 – Educational Aide (Teacher Assistant)
- 0802.10 – Educational Aide (Teacher Assistant), Bilingual
- 0835.20 – Fitness Trainer
- 0835.60 – Coaching
- 0835.70 – Aquatics and Lifesaving
- 0850.10 – Sign Language Interpreting
- 1305.00 – Child Development/Early Care and Education
- 1305.10 – Child and Adolescent Development
- 1305.20 – Children with Special Needs
- 1305.40 – Preschool Age Children
- 1305.50 – The School Age Child
- 1305.80 – Child Development Administration and Management
- 1305.90 – Infants and Toddlers
- 2104.00 – Human Services
- 2140.00 – Legal and Community Interpretation

There are eight high-quality occupations in the education & human development sector, accounting for nearly 47,800 jobs in 2021. One occupation requires a community college education, and seven occupations require a bachelor's degree. Employment for high-quality education occupations is projected to increase by 0.3% through 2026, with nearly 3,800 annual job openings.

Regional community colleges currently provide training programs related to seven high-quality education & human development occupations. In 2021, there were nearly 44,900 high-quality jobs related to education & human development training programs. These occupations are projected to decline by 0.3% through 2026, but will still offer more than 3,400 annual job openings.



Exhibit 33. High-quality community-college-level education & human development occupation related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Interpreters and Translators	1,014	14%	128	\$35.47

Source: Lightcast 22.2

Exhibit 34. High-quality bachelor's-degree-level education & human development occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Elementary School Teachers, Except Special Education	20,114	(3%)	1,420	\$44.49
Secondary School Teachers, Except Special and Career/Technical Education	11,743	(2%)	791	\$42.89
Middle School Teachers, Except Special and Career/Technical Education	5,299	(2%)	379	\$42.81
Child, Family, and School Social Workers	2,433	13%	295	\$23.58
Social and Community Service Managers	2,172	16%	267	\$34.41
Special Education Teachers, Kindergarten and Elementary School	2,106	(2%)	152	\$37.05

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for occupations in the education & human development sector than occupations other sectors.

- **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
- **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Complex Problem Solving:** Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.
- **Coordination:** Adjusting actions in relation to others' actions.
- **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- **Instructing:** Teaching others how to do something.
- **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.
- **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- **Negotiation:** Bringing others together and trying to reconcile differences.
- **Persuasion:** Persuading others to change their minds or behavior.
- **Reading Comprehension:** Understanding written sentences and paragraphs in work-related documents.
- **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
- **Speaking:** Talking to others to convey information effectively.

- **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- **Systems Evaluation:** Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- **Time Management:** Managing one's own time and the time of others.
- **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

High-Quality Education & Human Development Job Advertisements

Over the last 12 months, June 2021 through May 2022, approximately 1,700 job ads were posted for high-quality education & human development occupations. Between 2016 and 2021, ads for these occupations increased by 25%. Below are highlights from a high-quality education & human development job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Riverside County • Hemet Unified School District • California State University, San Bernardino • Hesperia Unified School District 	Most Common Job Titles <ul style="list-style-type: none"> • Teacher • Elementary Teacher • English Teacher • Case Manager • Training Specialist
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Teaching • Lesson Planning • Special Education • Music • Social Services 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • English • Communication Skills • Planning • Physical Abilities • Teamwork/Collaboration

According to the Center of Excellence (COE) business list, the largest employers in the education & human development sector, by employee count, are Ontario-Montclair School District; California State University, San Bernardino; Snowline Joint Unified School District; and Yucaipa-Calimesa Joint Unified School District.

There are seven education & human development programs that regional community colleges do not currently offer.

- 0809.00 – Special Education
- 0860.00 – Educational Technology
- 0899.00 – Other Education
- 1301.00 – Family and Consumer Sciences, General
- 1305.60 – Parenting and Family Education
- 1305.70 – Foster and Kinship Care
- 1308.00 – Family Studies

Regional community colleges do not provide training for one high-quality occupation: training and development specialists. In 2021, there were nearly 2,900 training and development specialist jobs in the region. Employment in this occupation is projected to increase by 10% through 2026, with more than 300 job openings available annually. Training and development specialists are trained by educational technology programs (TOP 0860.00).

Exhibit 35. High-quality bachelor's-degree-level education & human development occupation without a regional training program

Bachelor's-Degree-Level Occupation	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Training and Development Specialists	2,894	10%	337	\$31.02

Source: Lightcast 22.2



ENERGY, CONSTRUCTION, & UTILITIES

The energy, construction, & utilities sector comprises establishments primarily engaged in the construction, alteration, maintenance, and repair of residential and commercial buildings as well as distribution lines and related buildings and structures for utilities (i.e., water, sewer, petroleum, gas, power, and communication). This sector employs specialty trade contractors, whose primary activity is the utilization of occupation-specific skills that contribute to the completion of projects.¹ This sector aligns with the CDE building and construction trades, energy environment and utilities, and engineering and architecture sectors.

Building and Construction Trades

Ten out of 12 regional community colleges, currently offer energy, construction, & utilities programs related to building and construction trades, utilizing six program codes.

Programs Offered

- 0946.00 – Environmental Control Technology
- 0952.00 – Construction Crafts Technology
- 0952.20 – Electrical
- 0957.00 – Civil and Construction Management Technology
- 0957.20 – Construction Inspection
- 2102.10 – Public Works

There are 14 high-quality building and construction trades occupations in the energy, construction, & utilities sector, accounting for more than 70,700 jobs in 2021. One high-quality occupation requires a high school education, 11 occupations require community college education, and two occupations require a bachelor's degree. Employment for high-quality construction occupations is projected to increase by 8% through 2026, with nearly 8,000 job openings expected annually.

Regional community colleges currently provide training programs related to nine of the high-quality building and construction trades occupations. In 2021, there were nearly 39,500 high-quality jobs related to building and construction trades training programs. These occupations are projected to increase employment by 9%, with nearly 4,600 annual job openings.

Exhibit 36. High-quality high-school-level building and construction trades occupation related to regional training programs

High-School-Level Occupation	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Security and Fire Alarm Systems Installers	730	16%	102	\$25.17

Source: Lightcast 22.2

¹ United States Census Bureau, "North American Industry Classification System (NAICS)," 2017, accessed August 8, 2022, <https://www.census.gov/naics/?58967?yearbck=2017>.

Exhibit 37. High-quality community-college-level building and construction trades occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Electricians	8,634	15%	1,208	\$23.98
First-Line Supervisors of Construction Trades and Extraction Workers	8,551	6%	939	\$30.68
Plumbers, Pipefitters, and Steamfitters	6,212	8%	757	\$26.40
Operating Engineers and Other Construction Equipment Operators	4,641	6%	551	\$36.66
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4,540	9%	528	\$22.80
Construction and Building Inspectors	1,499	4%	187	\$39.46
Plasterers and Stucco Masons	1,592	2%	141	\$23.90

Source: Lightcast 22.2

Exhibit 38. High-quality bachelor's-degree-level building and construction trades occupation related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Construction Managers	6,330	11%	618	\$34.33

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for building and construction trades occupations in the energy, construction, & utilities sector than occupations in other sectors.

- **Equipment Maintenance:** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- **Equipment Selection:** Determining the kind of tools and equipment needed to do a job.
- **Installation:** Installing equipment, machines, wiring, or programs to meet specifications.
- **Operation and Control:** Controlling operations of equipment or systems.
- **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- **Repairing:** Repairing machines or systems using the needed tools.
- **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.

High-Quality Building and Construction Trades Job Advertisements

Over the last 12 months, June 2021 through May 2022, approximately 5,000 job ads were posted for high-quality building and construction trades occupations in the energy, construction, & utilities sector. Between 2016 and 2021, ads for high-quality building and construction trades occupations increased by 316%. Below are highlights from a high-quality building and construction trades job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • ServiceMaster • MasTec • CDM Smith • SunRun • Park West Construction 	Most Common Job Titles <ul style="list-style-type: none"> • Heavy Equipment Operator • Estimator • Construction Manager • HVAC Technician • Electrician
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Repair • Scheduling • Project Management • Budgeting • HVAC 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Organizational Skills • Physical Abilities • Troubleshooting • Detail-Oriented

According to the Center of Excellence (COE) business list, the largest employers in the building and construction trades sector, by employee count, are J Ginger Masonry, Berck's Old Time Plumbing Heating & Air, Pro Wall Lath & Plaster, and Pacific Production Plumbing.

There are 10 building and construction trades programs that regional community colleges do not currently offer.

- 0952.10 – Carpentry
- 0952.30 – Plumbing, Pipefitting, and Steamfitting
- 0952.40 – Glazing
- 0952.50 – Mill and Cabinet Work
- 0952.60 – Masonry, Tile, Cement, Lath and Plaster
- 0952.70 – Painting, Decorating, and Flooring
- 0952.80 – Drywall and Insulation
- 0952.90 – Roofing
- 0953.20 – Civil Drafting
- 0956.40 – Sheet Metal and Structural Metal

Regional community colleges do not provide training for five high-quality building and construction trades occupations. In 2021, there were more than 31,200 high-quality building and construction trades jobs for which regional community colleges did not provide training. Employment in these occupations is projected to increase by 6% through 2026, with just over 3,400 job openings available annually.

Exhibit 39. High-quality community-college-level building and construction trades occupations without regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Carpenters	20,758	4%	2,116	\$23.81
Plumbers, Pipefitters, and Steamfitters	6,212	8%	757	\$26.40
Structural Iron and Steel Workers	1,788	10%	227	\$33.47
Sheet Metal Workers	1,612	7%	177	\$27.25
Glaziers	878	15%	124	\$24.62

Source: Lightcast 22.2

Energy, Environment, and Utilities

Seven regional community colleges currently offer five programs related to energy, environment, and utilities.

Programs Offered

- 0303.00 – Environmental Technology
- 0934.30 – Telecommunications Technology
- 0934.40 – Electrical Systems and Power Transmission
- 0946.10 – Energy Systems Technology
- 0958.00 – Water and Wastewater Technology

There are four high-quality energy, environment, and utilities occupations in the energy, construction, & utilities sector, all of which require community college education. In 2021, there were nearly 6,900 high-quality energy, environment, and utilities jobs in the region. Employment for high-quality community-college-level jobs is projected to grow by 0.9%, with more than 700 annual job openings.

Exhibit 40. High-quality community-college-level energy, environment, and utilities occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Telecommunications Equipment Installers and Repairers, Except Line Installers	3,018	(1%)	339	\$27.82
Water and Wastewater Treatment Plant System Operators	1,458	1%	135	\$34.29
Telecommunications Line Installers and Repairers	1,230	2%	141	\$27.86
Electrical Power-Line Installers and Repairers	1,167	4%	112	\$41.06

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for energy, environment, and utilities occupations in the energy, construction, & utilities sector than occupations in other sectors.

- **Equipment Maintenance:** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- **Equipment Selection:** Determining the kind of tools and equipment needed to do a job.
- **Installation:** Installing equipment, machines, wiring, or programs to meet specifications.
- **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- **Operation and Control:** Controlling operations of equipment or systems.
- **Operations Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
- **Programming:** Writing computer programs for various purposes.
- **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- **Repairing:** Repairing machines or systems using the needed tools.
- **Science:** Using scientific rules and methods to solve problems.
- **Technology Design:** Generating or adapting equipment and technology to serve user needs.
- **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.

High-Quality Energy, Environment, and Utilities Job Advertisements

Over the last 12 months, June 2021 through May 2022, more than 700 job ads were posted for high-quality energy, environment, and utilities occupations in the energy, construction, & utilities sector. Between 2016 and 2021, ads for these occupations increased by 210%. Below are highlights from a high-quality energy, environment, and utilities job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none">• Charter Communications (Spectrum)• AT&T• HHS Construction Incorporated• Edison International• ServiceMaster	Most Common Job Titles <ul style="list-style-type: none">• Field Technician• Tower Foreman• Cable Technician• Cable Installer/Splicer• Lead Water Technician
Frequently Sought Specialized Skills <ul style="list-style-type: none">• Repair• Hand Tools• Telecommunications• Scheduling• Test Equipment	Frequently Sought Soft Skills <ul style="list-style-type: none">• Physical Abilities• Communication Skills• Troubleshooting• Problem Solving• Computer Literacy

According to the Center of Excellence (COE) business list, the largest employers in the energy, environment, and utilities sector, by employee count, are Eastern Municipal Water District, Coachella Valley Water District, and Southern California Edison.

Regional community colleges currently offer all programs related to energy, environment, and utilities.



Engineering and Architecture

Seven regional community colleges currently offer energy, construction, & utilities programs related to engineering and architecture, utilizing six program codes.

Programs Offered

- 0201.00 – Architecture and Architectural Technology
- 0924.00 – Engineering Technology, General (requires Trigonometry)
- 0953.00 – Drafting Technology
- 0953.10 – Architectural Drafting
- 0999.00 – Other Engineering and Related Industrial Technologies
- 2206.10 – Geographic Information Systems

There are three high-quality engineering and architecture occupations in the energy, construction, & utilities sector. One occupation requires a community college education, and two occupations require a bachelor's degree.

In 2021, there were more than 1,100 community-college-level jobs and nearly 5,000 bachelor's-degree-level jobs in the region. Community-college-level employment is projected to grow by 6% through 2026, with more than 100 annual job openings. Bachelor's-degree-level occupations are projected to have more than 400 annual job openings, growing by 7% over the next five years.

Exhibit 41. High-quality community-college-level engineering and architecture occupation related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Architectural and Civil Drafters	1,117	6%	121	\$25.29

Source: Lightcast 22.2

Exhibit 42. High-quality bachelor's-degree-level engineering and architecture occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Civil Engineers	3,358	9%	309	\$52.08
Architectural and Engineering Managers	1,592	3%	122	\$74.98

Source: Lightcast 22.2



According to O*NET, the following skills are, on average, more important for engineering and architecture occupations in the energy, construction, & utilities sector than occupations in other sectors.

- **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
- **Complex Problem Solving:** Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.
- **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- **Instructing:** Teaching others how to do something.
- **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- **Management of Financial Resources:** Determining how money will be spent to get the work done, and accounting for these expenditures.
- **Management of Material Resources:** Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
- **Mathematics:** Using mathematics to solve problems.
- **Operations Analysis:** Analyzing needs and product requirements to create a design.
- **Programming:** Writing computer programs for various purposes.
- **Reading Comprehension:** Understanding written sentences and paragraphs in work-related documents.
- **Science:** Using scientific rules and methods to solve problems.
- **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- **Systems Evaluation:** Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- **Technology Design:** Generating or adapting equipment and technology to serve user needs.
- **Time Management:** Managing one's own time and the time of others.

High-Quality Engineering and Architecture Job Advertisements

Over the last 12 months, June 2021 through May 2022, more than 1,000 job ads were posted for high-quality engineering and architecture occupations in the energy, construction, & utilities sector. Between 2016 and 2021, ads for these occupations increased by 94%. Below are highlights from a high-quality engineering and architecture job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • ServiceMaster • Albert Webb Associates • Michael Baker International • Psomas • Rick Engineering 	Most Common Job Titles <ul style="list-style-type: none"> • Project Engineering • Restoration Project Manager • Engineering Manager • CAD Drafter • Senior Civil Engineer
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Project Management • Civil Engineering • Budgeting • Scheduling • Calculation 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Planning • Writing • Research • Teamwork/Collaboration

According to the Center of Excellence (COE) business list, the largest employers in the engineering and architecture sector, by employee count, are Skanska USA Civil West California District, Herman Weissker Inc., HMC Architects, and K&B Engineering.



HEALTH

Due to an increasing population and longer life expectancy in California, the health sector's employment needs will continue to grow. Health care employment refers to careers in public and private hospitals, medical facilities, ambulatory health centers, long-term and residential care facilities, as well as public health and safety agencies. This sector aligns with the CDE health science and medical technology sector.

Health Science and Medical Technology

Eleven regional community colleges currently offer health programs, utilizing 26 program codes.

Programs Offered

- 0514.20 – Medical Office Technology
- 1201.00 – Health Occupations, General
- 1202.00 – Hospital and Health Care Administration
- 1205.10 – Phlebotomy
- 1208.00 – Medical Assisting
- 1208.10 – Clinical Medical Assisting
- 1208.20 – Administrative Medical Assisting
- 1210.00 – Respiratory Care/Therapy
- 1221.00 – Pharmacy Technology
- 1223.10 – Health Information Coding
- 1225.00 – Radiologic Technology
- 1227.00 – Diagnostic Medical Sonography
- 1228.00 – Athletic Training and Sports Medicine
- 1230.10 – Registered Nursing
- 1230.20 – Licensed Vocational Nursing
- 1230.30 – Certified Nurse Assistant
- 1230.80 – Home Health Aide
- 1239.00 – Psychiatric Technician
- 1240.10 – Dental Assistant
- 1240.20 – Dental Hygienist
- 1250.00 – Emergency Medical Services
- 1251.00 – Paramedic
- 1261.00 – Community Health Care Worker
- 1299.00 – Other Health Occupations
- 1309.00 – Gerontology
- 2104.40 – Alcohol and Controlled Substances

There are 11 high-quality health occupations. Nine of the occupations require a community college education, and two occupations require a bachelor's degree. In 2021, there were more than 59,200 high-quality health jobs.

In 2021, approximately 85% of the high-quality health jobs in the region were community-college-level. Bachelor's-degree-level occupations are projected to grow the fastest through 2026, increasing by 18%, with just over 1,100 annual job openings. Employment in community-college-level occupations is projected to increase by 11%, with more than 4,300 annual job openings through 2026.

Exhibit 43. High-quality community-college-level health occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Registered Nurses	31,332	11%	2,373	\$52.44
Licensed Vocational Nurses	8,011	10%	791	\$28.71
Phlebotomists	1,482	11%	215	\$21.82
Clinical Laboratory Technologists and Technicians	1,928	12%	183	\$24.82
Dental Hygienists	2,189	10%	181	\$47.63
Radiologic Technologists and Technicians	1,702	11%	164	\$40.34
Psychiatric Technicians	1,586	7%	136	\$30.25
Respiratory Therapists	1,667	15%	132	\$36.40
Physical Therapist Assistants	622	35%	128	\$31.46

Source: Lightcast 22.2

Exhibit 44. High-quality bachelor's-degree-level health occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	4,724	15%	601	\$25.74
Medical and Health Services Managers	3,979	21%	501	\$59.18

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for occupations in the health sector than occupations in other sectors.

- **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
- **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Coordination:** Adjusting actions in relation to others' actions.
- **Instructing:** Teaching others how to do something.
- **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.
- **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- **Science:** Using scientific rules and methods to solve problems.
- **Service Orientation:** Actively looking for ways to help people.
- **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
- **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

High-Quality Health Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 26,800 job ads were posted for high-quality health occupations. Between 2016 and 2021, ads for high-quality health occupations increased by 89%. Below are highlights from a high-quality health job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none">• Kaiser Permanente (Fontana, Riverside, Moreno Valley, Ontario)• Universal Health Services (Temecula Valley Hospital, Rancho Springs Medical Center, Inland Valley Medical Center, Corona Regional Medical Center)• Riverside Community Hospital• Kindred Healthcare (Rancho Cucamonga, Ontario, Perris)	Most Common Job Titles <ul style="list-style-type: none">• Registered Nurse• Licensed Vocational Nurse• Phlebotomist• Registered Nurse Case Manager• Clinical Supervisor• Registered Dental Hygienist
Frequently Sought Specialized Skills <ul style="list-style-type: none">• Patient Care• Treatment Planning• Advanced Cardiac Life Support (ACLS)• Acute Care• Cardiopulmonary Resuscitation (CPR)	Frequently Sought Soft Skills <ul style="list-style-type: none">• Communication Skills• Teamwork/Collaboration• Planning• Problem Solving• Computer Literacy

According to the Center of Excellence (COE) business list, the largest employers in the health sector, by employee count, are ACE Programs Management, Advanced Functional Medicine, Advantage Infusion Care, and Arrowhead Regional Medical Center.

Regional community colleges do not currently offer training related to the following programs. However, these programs do not train for additional occupations that meet the high-demand and high-wage criteria for high-quality employment opportunities.

- 1255.00 – Mortuary Science
- 1262.00 – Massage Therapy





INFORMATION & COMMUNICATION TECHNOLOGIES (ICT)/DIGITAL MEDIA

Job activities in the information and communications technologies (ICT)/digital media sector range from protecting computer infrastructure from cyberattacks to the latest offerings in digital entertainment. This sector aligns with the CDE information & communication technologies sector and the arts, media, and entertainment sector.

Arts, Media, and Entertainment

Eleven out of twelve of the regional community colleges offer ICT/digital media programs related to arts, media, and entertainment, utilizing 15 program codes.

Programs Offered

- 0602.00 – Journalism
- 0604.00 – Radio and Television
- 0604.10 – Radio
- 0604.20 – Television (including combined TV/Film/Video)
- 0612.20 – Film Production
- 0614.00 – Digital Media
- 0614.10 – Multimedia
- 0614.20 – Electronic Game Design
- 0614.40 – Animation
- 0614.50 – Desktop Publishing
- 0614.60 – Computer Graphics and Digital Imagery
- 1005.00 – Commercial Music
- 1006.00 – Technical Theater
- 1012.00 – Applied Photography
- 1030.00 – Graphic Art and Design

There are two high-quality arts, media, and entertainment occupations in the ICT/digital media sector. One occupation requires a community college education, and one occupation requires a bachelor's degree.

In 2021, there were more than 1,600 community-college-level jobs, and more than 1,200 bachelor's-degree-level in the region. Employment for the community-college-level occupation is projected to grow by 11%, with more than 200 annual job openings through 2026. The bachelor's-degree-level occupation is projected to have more than 100 annual job openings, growing by 1% over the next five years.

Exhibit 45. High-quality community-college-level arts, media, and entertainment occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Photographers	1,646	11%	202	\$24.56

Source: Lightcast 22.2

Exhibit 46. High-quality bachelor's-degree-level arts, media, and entertainment occupation related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Writers and Authors	1,245	1%	124	\$25.97

Source: Lightcast 22.2

No occupational skills in O*NET are more important for arts, media, and entertainment occupations in the ICT/digital media sector than occupations in other sectors.

High-Quality Arts, Media, and Entertainment Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 400 job ads were posted for high-quality arts, media, and entertainment occupations in the ICT/digital media sector. Between 2016 and 2021, ads for high-quality arts, media, and entertainment occupations increased by 375%. Approximately 71% of job ads were posted for photographers. Below are highlights from a high-quality arts, media, and entertainment job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Cherry Hill Programs • Shutterfly • Lifetouch • Cox Automotive • Nationwide Studios Incorporated 	Most Common Job Titles <ul style="list-style-type: none"> • Photographer • School Photographer • Seasonal Studio Photographer • Content Writer • Copywriter
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Photography • Customer Service • Adobe Photoshop • Sales • Social Media 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Creativity • Editing • Writing • Teamwork/Collaboration

According to the Center of Excellence (COE) business list, the largest employers in the arts, media, and entertainment sector, by employee count, are Desert Sun Media Group, Press-Enterprise, and Daily Press Newspaper.

There are three arts, media, and entertainment programs that regional community colleges do not currently offer. However, these programs do not train for additional occupations that meet the high-demand and high-wage criteria for high-quality employment opportunities.

- 0604.30 – Broadcast Journalism
- 0607.00 – Technical Communication
- 1013.00 – Commercial Art

Information and Communication Technologies

Although most employers in this sector seek candidates with a bachelor's degree, job opportunities also exist for those with a community college education. All regional community colleges currently offer ICT programs, utilizing 14 program codes.

Programs Offered

- 0614.30 – Website Design and Development
- 0701.00 – Information Technology, General
- 0702.00 – Computer Information Systems
- 0702.10 – Software Applications
- 0707.00 – Computer Software Development
- 0707.10 – Computer Programming
- 0707.20 – Database Design and Administration
- 0707.30 – Computer Systems Analysis
- 0708.00 – Computer Infrastructure and Support
- 0708.10 – Computer Networking
- 0708.20 – Computer Support
- 0709.00 – World Wide Web Administration
- 0709.10 – E-Commerce (Technology emphasis)
- 0934.10 – Computer Electronics

There are six high-quality ICT occupations in the ICT/digital media sector. Three occupations require a community college education, and three require a bachelor's degree. In 2021, there were more than 6,500 community-college-level ICT jobs and nearly 9,700 bachelor's-degree-level ICT jobs.

Employment for community-college-level jobs is projected to grow by 8%, with nearly 600 annual job openings. Bachelor's-degree-level occupations are projected to have almost 1,000 annual job openings, growing by 12% over the next five years.

Exhibit 47. High-quality community-college-level ICT occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Computer User Support Specialists	3,305	9%	305	\$27.85
Web Developers and Digital Interface Designers	1,514	8%	139	\$28.26
Network and Computer Systems Administrators	1,727	6%	136	\$41.63

Source: Lightcast 22.2

Exhibit 48. High-quality bachelor's-degree-level ICT occupations related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Software Developers and Software Quality Assurance Analysts and Testers	5,283	16%	576	\$46.91
Computer Systems Analysts	2,405	7%	206	\$41.87
Computer and Information Systems Managers	2,008	8%	183	\$62.64

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for information and communication technologies occupations in the information & communication technologies/digital media sector than occupations in other sectors.

- **Complex Problem Solving:** Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.
- **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- **Installation:** Installing equipment, machines, wiring, or programs to meet specifications.
- **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- **Mathematics:** Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- **Operations Analysis:** Analyzing needs and product requirements to create a design.
- **Programming:** Writing computer programs for various purposes.
- **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- **Systems Evaluation:** Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- **Technology Design:** Generating or adapting equipment and technology to serve user needs.

High-Quality Information and Communication Technologies Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 5,500 job ads were posted for high-quality ICT occupations. Between 2016 and 2021, ads for high-quality ICT occupations increased by 103%. Below are highlights from a high-quality job ad search.

Employers Posting the Most Ads

Most Common Job Titles

- Systems Administrator
- Fiber Network Field Technician
- IT Technician
- Geek Squad Agent
- Help Desk Technician

Frequently Sought Specialized Skills

- Technical Support
- Customer Service
- Repair
- Software Development
- Project Management

Frequently Sought Soft Skills

- Communication Skills
- Troubleshooting
- Problem Solving
- Teamwork/Collaboration
- Planning

According to the Center of Excellence (COE) business list, the largest employers in the information and communication technologies sector, by employee count, are Esri, Timerack, DXC Technology, and Automatic Data Processing (ADP).





PUBLIC SAFETY

Public safety career cluster services are generally provided by local, state, and federal government entities for the benefit of residents. This sector aligns with the CDE public services sector.

Public Services

All regional community colleges offer programs related to public safety, utilizing 10 program codes.

Programs Offered

- 1402.00 – Paralegal
- 1602.00 – Library Technician (Aide)
- 2105.00 – Administration of Justice
- 2105.10 – Corrections
- 2105.30 – Industrial and Transportation Security
- 2105.40 – Forensics, Evidence, and Investigation
- 2105.50 – Police Academy
- 2133.00 – Fire Technology
- 2133.50 – Fire Academy
- 4931.00 – Vocational ESL

There are eight high-quality occupations in the public safety sector, accounting for more than 20,800 jobs in 2021. Seven occupations require a community college education, and one occupation requires a bachelor's degree. Employment for high-quality public safety occupations is projected to increase by 6% through 2026, with nearly 2,200 annual job openings.

Regional community colleges currently provide training programs related to seven of the high-quality public safety occupations displayed below. In 2021, there were nearly 19,700 high-quality jobs related to public safety programs. These occupations are projected to increase employment by 6%, with nearly 2,100 annual job openings.

Exhibit 49. High-quality community-college-level public safety occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Police and Sheriffs Patrol Officers	6,066	7%	561	\$50.38
Correctional Officers and Jailers	5,333	2%	519	\$40.98
Firefighters	2,970	8%	272	\$32.42
Paralegals and Legal Assistants	1,958	10%	258	\$27.00
Miscellaneous First-Line Supervisors, Protective Service Workers	1,175	14%	158	\$25.73
Library Technicians	993	1%	145	\$22.27
Court, Municipal, and License Clerks	1,166	9%	140	\$22.06

Source: Lightcast 22.2

None of the occupational skills in O*NET are more important for occupations in the public services sector than occupations in other sectors.

High-Quality Public Safety Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 1,100 job ads were posted for high-quality public safety occupations. Between 2016 and 2021, ads for these occupations increased by 111%. Below are highlights from a high-quality public safety job advertisement search

Employers Posting the Most Ads <ul style="list-style-type: none"> • San Bernardino County • Riverside County • City of San Bernardino • State of California 	Most Common Job Titles <ul style="list-style-type: none"> • Paralegal/Legal Assistant • Family Law Paralegal • Public Safety Officer • Police Cadet • Litigation Paralegal
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Public Health and Safety • Legal Documentation • Customer Service • Litigation • Cardiopulmonary Resuscitation (CPR) 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Writing • Communication Skills • Organizational Skills • Detail-Oriented • Physical Abilities

According to the Center of Excellence (COE) business list, the largest employers in the public safety sector, by employee count, are San Bernardino County Sheriff's Department, Riverside County, Cabazon Band of Mission Indians, and West Valley Detention Center.

There are two public safety programs that regional community colleges do not currently offer.

- 2105.20 – Probation and Parole
- 2133.10 – Wildland Fire Technology

Regional community colleges do not provide training for one high-quality occupation: probation officers and correctional treatment specialists. The median hourly earnings for probation officers and correctional treatment specialists is high, and employment is projected to grow by 7% through 2026. Probation officers and correctional treatment specialists are typically trained by community college probation and parole programs (TOP 2105.20).

Exhibit 50. High-quality bachelor's-degree-level public safety occupation without a regional training program

Bachelor's-Degree-Level Occupation	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Probation Officers and Correctional Treatment Specialists	1,163	7%	115	\$41.59

Source: Lightcast 22.2



RETAIL, HOSPITALITY, & TOURISM

The retail, hospitality, & tourism sector encompasses lodging, restaurants, retail stores, theme parks, cruise lines, and other tourism services. Retail trade primarily engages in the sale of merchandise, while the hospitality and tourism sector primarily provides services related to lodging, food service, and local attractions. This sector aligns with the CDE hospitality, tourism, and recreation and fashion and interior design sectors.

Fashion and Interior Design

Three of the 12 regional community colleges offer retail, hospitality, & tourism programs related to fashion and interior design, utilizing five program codes.

Programs Offered

- 1302.00 – Interior Design and Merchandising
- 1303.10 – Fashion Design
- 1303.20 – Fashion Merchandising
- 1303.30 – Fashion Production
- 3007.00 – Cosmetology and Barbering

The occupations related to fashion and interior design programs do not meet the high-quality criteria.

The TOP code and title 1303.00-Fashion is the only program code in this sector not currently offered by regional community colleges.

According to O*NET, the following skill is, on average, more important for fashion and interior design occupations in the retail, hospitality, & tourism sector than occupations in other sectors.

- **Operations Analysis:** Analyzing needs and product requirements to create a design.

Hospitality, Tourism, and Recreation

Eight regional community colleges currently offer programs related to hospitality, tourism, and recreation, utilizing eight program codes.

Programs Offered

- 0836.10 – Recreation Assistant
- 1306.00 – Nutrition, Foods, and Culinary Arts
- 1306.20 – Dietetic Services and Management
- 1306.30 – Culinary Arts
- 1307.00 – Hospitality
- 1307.10 – Restaurant and Food Services and Management
- 1307.20 – Lodging Management
- 1307.30 – Resort and Club Management

There are three high-quality occupations align with the hospitality, tourism, and recreation sector. Two occupations require a community college education, and one occupation requires a bachelor's degree.

In 2021, there were nearly 5,900 community-college-level jobs and nearly 900 bachelor's degree-level jobs. Employment for community-college-level jobs is projected to grow by 7%, with nearly 800 annual job openings. Bachelor's-degree-level employment is projected to have more than 100 annual job openings, growing by 10% over the next five years.

Exhibit 51 High-quality community-college-level hospitality, tourism, and recreation occupations related to regional training programs

Community-College-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Food Service Managers	4,713	7%	610	\$23.68
Chefs and Head Cooks	1,153	8%	170	\$25.84

Source: Lightcast 22.2

Exhibit 52. High-quality bachelor's-degree-level hospitality, tourism, and recreation occupation related to regional training programs

Bachelor's-Degree-Level Occupations	2021 Jobs	Growth Rate	Annual Job Openings	Median Hourly Earnings
Meeting, Convention, and Event Planners	883	10%	113	\$23.56

Source: Lightcast 22.2

According to O*NET, the following skills are, on average, more important for hospitality, tourism, and recreation occupations in the retail, hospitality, & tourism sector than occupations in other sectors.

- **Management of Material Resources:** Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
- **Service Orientation:** Actively looking for ways to help people.

High-Quality Hospitality, Tourism, and Recreation Job Advertisements

Over the last 12 months, June 2021 through May 2022, nearly 6,300 job ads were posted for high-quality hospitality, tourism, and recreation occupations in the retail, hospitality, & tourism sector. Approximately 82% of ads were posted for food service managers. Between 2016 and 2021, ads for these occupations increased by 88%. Below are highlights from a high-quality hospitality, tourism, and recreation job ad search.

Employers Posting the Most Ads <ul style="list-style-type: none"> • Jack in the Box • Del Taco • Taco Bell • Raising Cane's • Domino's Pizza 	Most Common Job Titles <ul style="list-style-type: none"> • General Manager • Assistant Manager • Shift Manager • Restaurant Manager • Team Manager
Frequently Sought Specialized Skills <ul style="list-style-type: none"> • Restaurant Management • Scheduling • Guest Services • Food Safety • Staff Management 	Frequently Sought Soft Skills <ul style="list-style-type: none"> • Communication Skills • Physical Abilities • Teamwork/Collaboration • Problem Solving • Organizational Skills

According to the Center of Excellence (COE) business list, the largest employers in the hospitality, tourism, and recreation sector, by employee count, are Fantasy Springs Resort Casino, Mountain High Ski Resort, Big Bear Mountain Resort, Agua Caliente Resort and Spa, and Yaamava' Resort and Casino at San Manuel.

There are three hospitality, tourism, and recreation programs that regional community colleges do not currently offer. However, these programs do not train for additional occupations that meet the high-demand and high-wage criteria for high-quality employment opportunities.

- 0959.10 – Diving and Underwater Safety
- 3009.00 – Travel Services and Tourism
- 3020.40 – Flight Attendant

SUMMARY OF REGIONAL FINDINGS AND RECOMMENDATIONS

Key findings

The Inland Empire/Desert Region is a vast area served by 12 community colleges dedicated to closing the employment gap between our students and employers. An effective community college educational system, providing community-college-level skills training, is critical to serving our diverse population and playing to the strengths of regional industry employment needs and composition.

In 2021, the region contained about 4.7 million residents or approximately 12% of California's total population. By 2026, the region's population is projected to increase by 3.9%, adding about 183,000 additional residents. Regional growth is projected to outpace state and national growth, which are projected to grow by 0.1% and 2.6%, respectively.

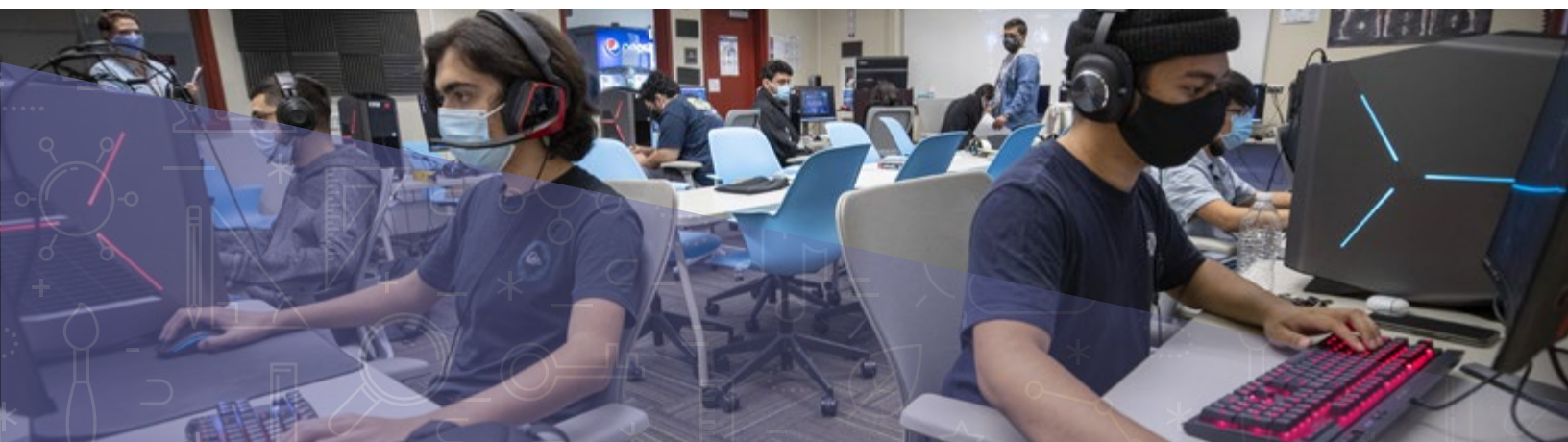
Residents aged 65 years and older are the fastest-growing population age group in the region, increasing by 19% over the next five years, adding nearly 127,000 residents. This age group's projected rapid increase may indicate an increased need for health care services and demand for leisure activities. The region's working-age population, residents aged 25-to-64, comprised 51% of the region's population in 2021. Over the next five years, this group is expected to gain about 71,700 residents, expanding by 3%.

The cohort of younger residents, aged 10-to-14, typically representing enrollments for the community colleges in the next five to ten years, is projected to shrink by 1% by 2026. The 15-to-19 age group, representing high school students and recent graduates, accounts for just over 7% of the 2021 population and is projected to increase by 3% over the next five years. Targeted outreach about the community colleges' program offerings to the local K-12 education system may be essential to maintaining or expanding future student enrollments.

Approximately 45% of regional residents have a high school diploma or less, a 9% higher share than the state. This may indicate an opportunity for more career education program (CE) outreach to increase regional educational attainment. The region also has a greater share of residents with a community college education (33%, some college but no degree, or an associate degree) than California (29%). The region has a smaller share of residents with a bachelor's degree or higher, 22%, compared to 35% in California. Reiterating that the region's postsecondary institutions have an overall opportunity to boost educational attainment beyond a high school diploma, thus increasing access to more jobs and higher wage opportunities.

Inland Empire/Desert community colleges currently offer programs that fall into each of the 10 CCCCCO sectors. In 2021, regional programs prepared students for employment in nearly 393,400 high-quality jobs, of which approximately 64% (253,400 jobs) were community-college-level. The high-quality occupations trained by regional community college programs are projected to have nearly 27,100 annual job openings in the region. Through the expansion of program offerings, regional community colleges may prepare students for an additional 8,500 annual job openings.

The regional community colleges provide an assortment of career education training and program offerings that address projected high-quality employment demand through 2026. However, regional community colleges have the opportunity to develop new programs





Recommendations

There are multiple employment opportunities in the region with CE training requirements not currently addressed by existing programs. Furthermore, colleges may expand current program offerings related to several sectors to address the projected employment demand for more workers. The region is projected to have nearly 91,300 community-college-level annual job openings over the next five years. Community colleges will continue to have several avenues available to close the employment gap between our students and employers.

The recommendations in this assessment are broad, and opportunities for program expansion at the subregional level may exist, which are otherwise overshadowed by the greater regional demand. Examples of CCCCCO sectors that warrant further exploration to determine if it is appropriate for colleges to develop new programs include:

- Advanced transportation & logistics
- Energy, construction, & utilities
- Business & entrepreneurship

The advanced transportation & logistics sector will experience strong employment demand over the next five years. Transportation and warehousing employers are projected to add more than 41,100 jobs over the next five years, growing employment by 20.3%. Many of the job openings in this sector are for heavy and tractor-trailer truck drivers (4,978 annual job openings).

Besides truck driving jobs, the colleges may choose to develop logistics and warehousing programs that prepare students for supervisor and manager positions. Logistics and warehousing workers with years of experience in the industry may benefit from a community college program that boosts their leadership skills and opens them to advanced career opportunities.

- First-line supervisors of transportation and material moving workers, except aircraft cargo handling supervisors, 1,472 annual job openings, \$28.42 median hourly
- Transportation, storage, and distribution managers, 310 annual job openings, \$44.44 median hourly

Energy, construction, & utilities is a sector that regional colleges may want to focus on for further program development, particularly in the construction industry. Regional employers in the construction industry are projected to add nearly 9,400 jobs (representing 6.6% growth) over the next five years. High-quality community-college-level occupations without training programs include:

- Carpenters, 2,116 annual job openings, \$23.81 median hourly earnings
- Plumbers, pipefitters, and steamfitters, 757 annual job openings, \$26.40 median hourly earnings
- Structural iron and steel workers, 227 annual job openings, \$33.47 median hourly earnings
- Sheet metal workers, 177 annual job openings, \$27.25 median hourly earnings
- Glaziers, 124 annual job openings, \$24.62 median hourly earnings

Regional colleges and trade unions representing occupations may consider developing a training partnership to collaboratively address the high demand for these occupations.

Lastly, the business and entrepreneurship sector may consider adding training programs that lead to the high-quality claims adjusters, examiners, and investigators occupation. This occupation provides a \$38.95 median hourly rate and is projected to have 121 annual job openings.

The business and entrepreneurship sector contains training related to several community-college-level and bachelor's-degree-level occupations that may find employment in nearly every industry sector to support business operations. The community college may also consider partnering with the local four-year universities to develop transfer pathways to bachelor's degree attainment.

In addition, the community colleges are strategically positioned to partner with local high schools' career education pathways to develop dual enrollment agreements or paths to continue CE training and provide access to higher-earning community college-level jobs.

Further research may determine if programs exist at nearby for-profit proprietary schools or other avenues. A conversation with regional employers may reveal the potential need for program expansion or reveal emerging technologies or skills gaps not addressed by current offerings.



MORE ABOUT THE CENTERS OF EXCELLENCE

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California Community Colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Education (CE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California Community Colleges. More information about the Centers of Excellence is available at www.coecccc.net.

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