

APRIL 2021

VICTOR VALLEY COLLEGE LOCAL WORKFORCE DEMAND ASSESSMENT



A partnership between the
Inland Empire/Desert Centers of Excellence
and the Victor Valley College Research Team

Strong Workforce Data Analytics
and Alignment Project



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

TABLE OF CONTENTS

| | |
|--|----|
| Introduction..... | 3 |
| Methodology..... | 4 |
| Demographic Composition..... | 5 |
| Industry Employment and Business Activity..... | 10 |
| Occupational Employment in the Victor Valley College Area..... | 12 |
| Victor Valley College Program Offerings by Career Education Industry Sector..... | 13 |
| Agriculture and Natural Resources Sector..... | 14 |
| Arts, Media, and Entertainment Sector..... | 16 |
| Building and Construction Trades Sector..... | 18 |
| Business and Finance Sector..... | 20 |
| Education, Child Development, and Family Services Sector..... | 23 |
| Energy, Environment, and Utilities Sector..... | 25 |
| Engineering and Architecture Sector..... | 26 |
| Health Science and Medical Technology Sector..... | 28 |
| Hospitality, Tourism, and Recreation Sector..... | 30 |
| Information and Communication Technologies Sector..... | 31 |
| Manufacturing and Product Development Sector..... | 33 |
| Marketing, Sales, and Services Sector..... | 35 |
| Public Services Sector..... | 37 |
| Transportation Sector..... | 39 |
| Additional CDE Sectors and Career Opportunities..... | 41 |
| Key Findings and Recommendations..... | 42 |
| Appendix A: Victor Valley College Area..... | 44 |
| Appendix B: Demographic Composition Reference..... | 45 |
| Appendix C: Industry and Location Quotient Definitions, and Sectors with Fewer than 1,000 Jobs..... | 47 |
| Appendix D: Key Terms and Definitions, and Reference Table with Occupational Demand and WageS..... | 48 |
| Appendix E: CDE-to-CCCCO-Priority-Sector Crosswalk..... | 56 |
| Appendix F: References Cited and Resources..... | 58 |

COVID-19 Disclaimer

This report includes employment projection data by Emsi. Emsi’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

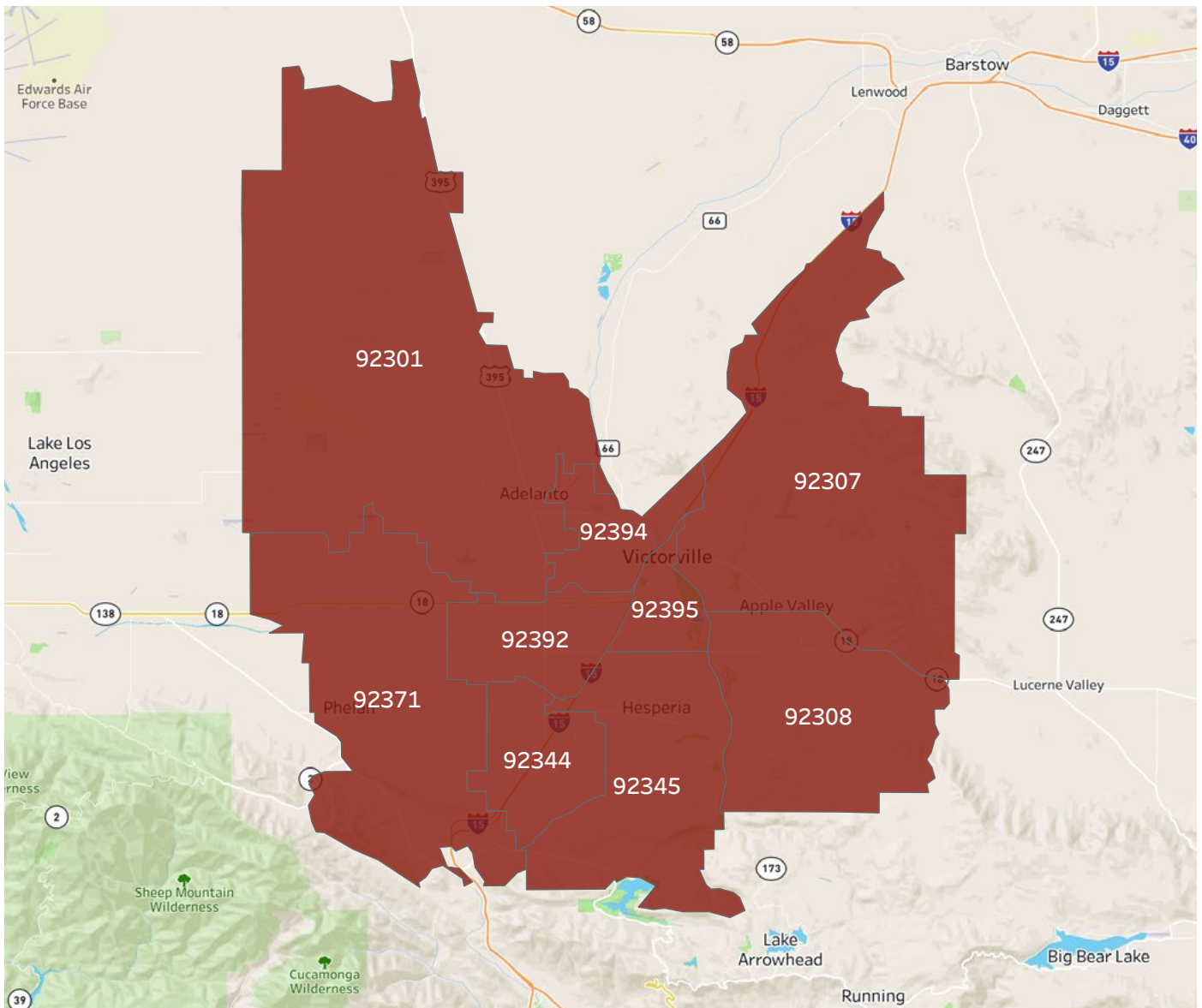
INTRODUCTION

Located in the High Desert subregion of the Inland Empire/Desert Region, Victor Valley College serves the communities of Adelanto, Apple Valley, Hesperia, Phelan, and Victorville. Victor Valley College's main campus is located in Victorville. In addition to the main campus, the college offers public safety programs at the High Desert Training Center in Apple Valley and aeronautics programs at the Southern California Logistics Airport (SCLA) in Victorville.

To equitably serve residents and create programs that align with local business needs, community colleges should develop an awareness of their surrounding populations and area employers. With this knowledge, colleges have the ability to effectively serve their communities and build programs that lead to gainful employment opportunities for students after program completion.

This assessment by the Inland Empire/Desert Region Center of Excellence, in partnership with Victor Valley College's research staff, seeks to illuminate the job opportunities available to students within the area served by Victor Valley College and determine to what extent the college is meeting local employer demand. Furthermore, this analysis identifies opportunities for the college to create new training programs for in-demand occupations for which no programs currently exist.

Exhibit 1: Area served by Victor Valley College



Source: Emsi, Tableau

METHODOLOGY

The analysis in this local workforce demand assessment reviews Victor Valley College's area population, industries, and community college programs aligned to an occupational crosswalk. The area examined in this report may not perfectly align to the college's established service area due to the geographic shape and placement of the selected ZIP codes for analysis. ZIP codes within and beyond the college's established boundaries were examined to fully capture its student population, business partnerships, and nearby job opportunities. Appendix A contains detailed information by area ZIP code for the population and the number of middle-skill jobs in 2019. Victor Valley College's program offerings are organized by the California Department of Education (CDE) industry sectors. A CDE-to-Taxonomy-of-Programs (TOP) crosswalk, validated by the California Community Colleges Chancellor's Office, was used to link CDE sectors to Victor Valley College's TOP code offerings. Linking Victor Valley College's TOP code offerings to CDE sectors provides a foundation for aligning local secondary career education (CE) course offerings to community college programs in future studies.

A crosswalk linking TOP codes with the Standard Occupational Classification (SOC) System, developed by the Centers of Excellence for Labor Market Research, was used to identify community college programs that prepare students for related middle-skill and higher-skill occupations. Middle-skill occupations typically require educational attainment greater than a high school diploma, but less than a four-year degree. The higher-skill jobs examined in this study are limited to those that typically require only a bachelor's degree to enter employment, providing insight into employment opportunities for community college students who transfer to four-year colleges and universities.

The number of annual job openings for occupations presented in this study are representative of the college's geographic boundary, providing a hyper localized view of workforce demand. This study addresses the in-demand and high-wage occupation criteria established by the Perkins V Comprehensive Local Need Assessment (CLNA) Framework template. For this study, an occupation is in-demand if it has at least 100 annual job openings in the Inland Empire/Desert Region. An occupation is high-wage if its median hourly wage meets or exceeds \$20.86 per hour, the average median hourly wage for all California occupations. All occupational data is sourced from Emsi 20.2; QCEW, non-QCEW, Self-Employed. Appendix D lists comprehensive occupational demand and wage data for all occupations included in this report. Finally, Appendix E contains the crosswalk linking CDE sectors with the California Community Colleges Chancellor's Office (CCCCO) sectors.



DEMOGRAPHIC COMPOSITION

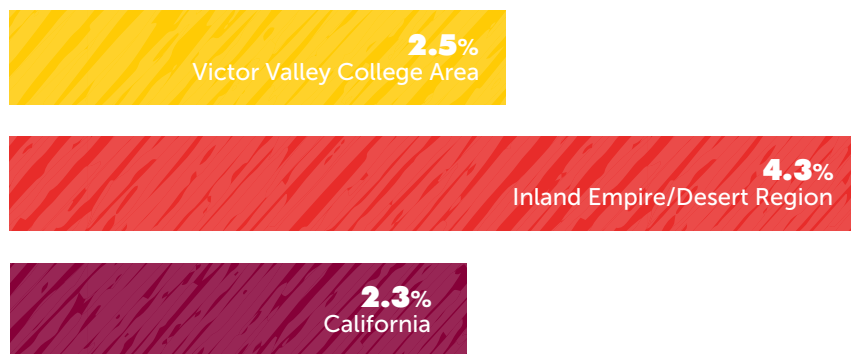
This section analyzes the demographic characteristics of the Victor Valley College area, including population count, gender, race/ethnicity, age, and educational attainment. Understanding the local area's composition is essential to ensure the college is serving its population and undertaking appropriate planning for future student cohorts.

Resident Population

The Victor Valley College area contains 369,656 residents or approximately 8% of the Inland Empire/Desert Region population. The largest city in the area is Victorville, which is the 48th largest city in California with an estimated 124,642 residents in 2019, according to the California Department of Finance.

Over the five-year period between 2019 and 2024, the area's population is projected to increase by 2.5%, adding 9,095 additional residents (Exhibit 2). Local growth is slower than that of the region overall, which is projected to increase by 4.3% during the same five-year timeframe, but slightly faster than California overall with 2.3% growth.

Exhibit 2: Five-year population growth, Victor Valley College area, Inland Empire/Desert Region, and California

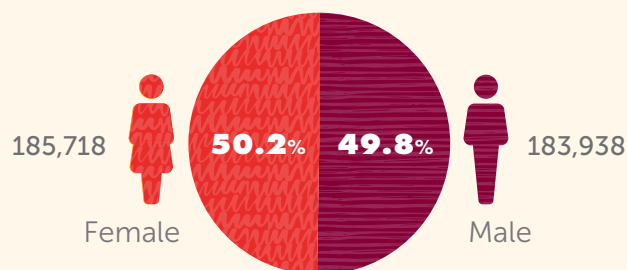


Source: Emsi 20.2

Resident Gender

The Victor Valley College area has a nearly equal proportion of males and females, with women representing 50.2% of the population and men representing 49.8%. This mirrors the gender share in the region. Appendix B displays gender shares for the college area and the region.

Exhibit 3: 2019 gender population share, Victor Valley College area



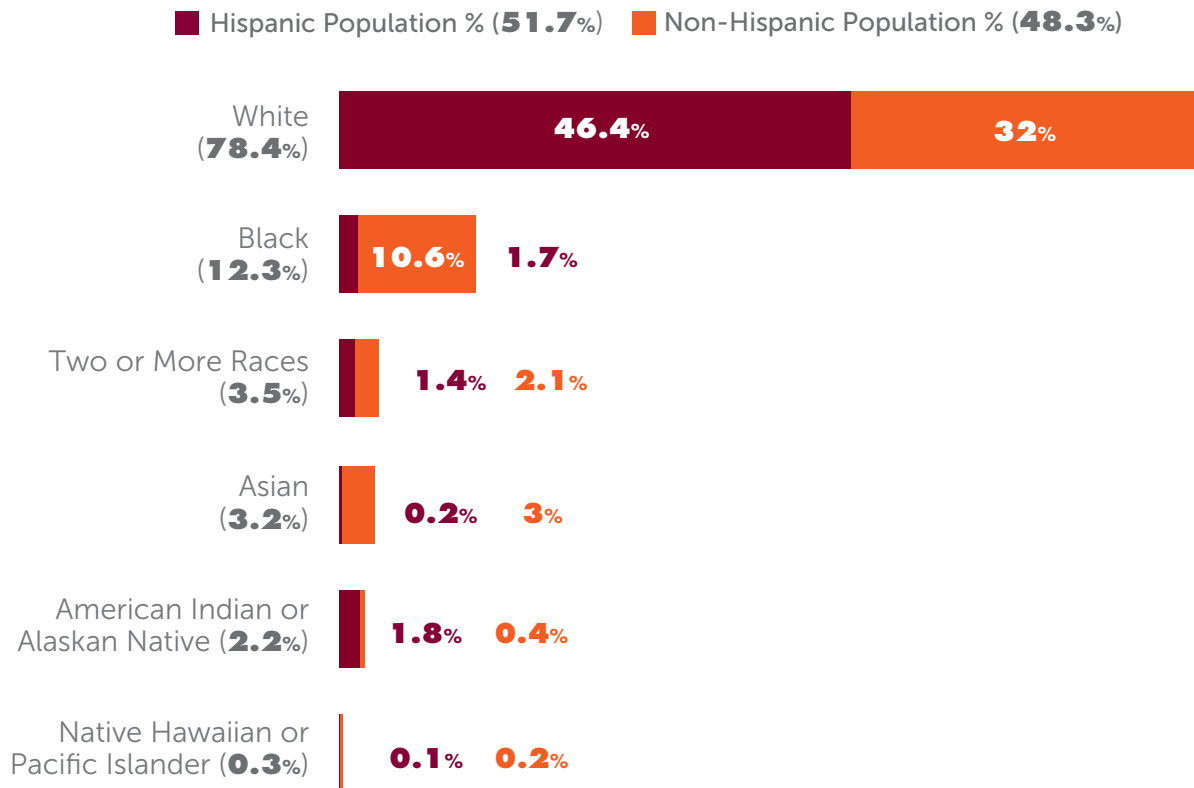
Source: Emsi 20.2

Race and Hispanic 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 questioner asks each resident to self-identify their 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 policy decision-making, including equal employment opportunities and racial disparities in health and the environment assessments. (Census 2020).

The largest ethnic groups in the Victor Valley College area are White (Hispanic) (46.4% of the population), White (Non-Hispanic) (32%), and Black (Non-Hispanic) (10.6%). The total Hispanic population in the college area is 51.7%, similar to the total Hispanic population of the region, 52.1%. The categories displayed in Exhibit 4 may not align with the community college student population’s race and ethnicity information due to differing data collection methods. Appendix B contains regional race and ethnicity figures and shares as well as definitions for each racial and ethnic category.

Exhibit 4: 2019 Race (total share) and Hispanic Ethnicity population share, Victor Valley College area



Source: Emsi 20.2

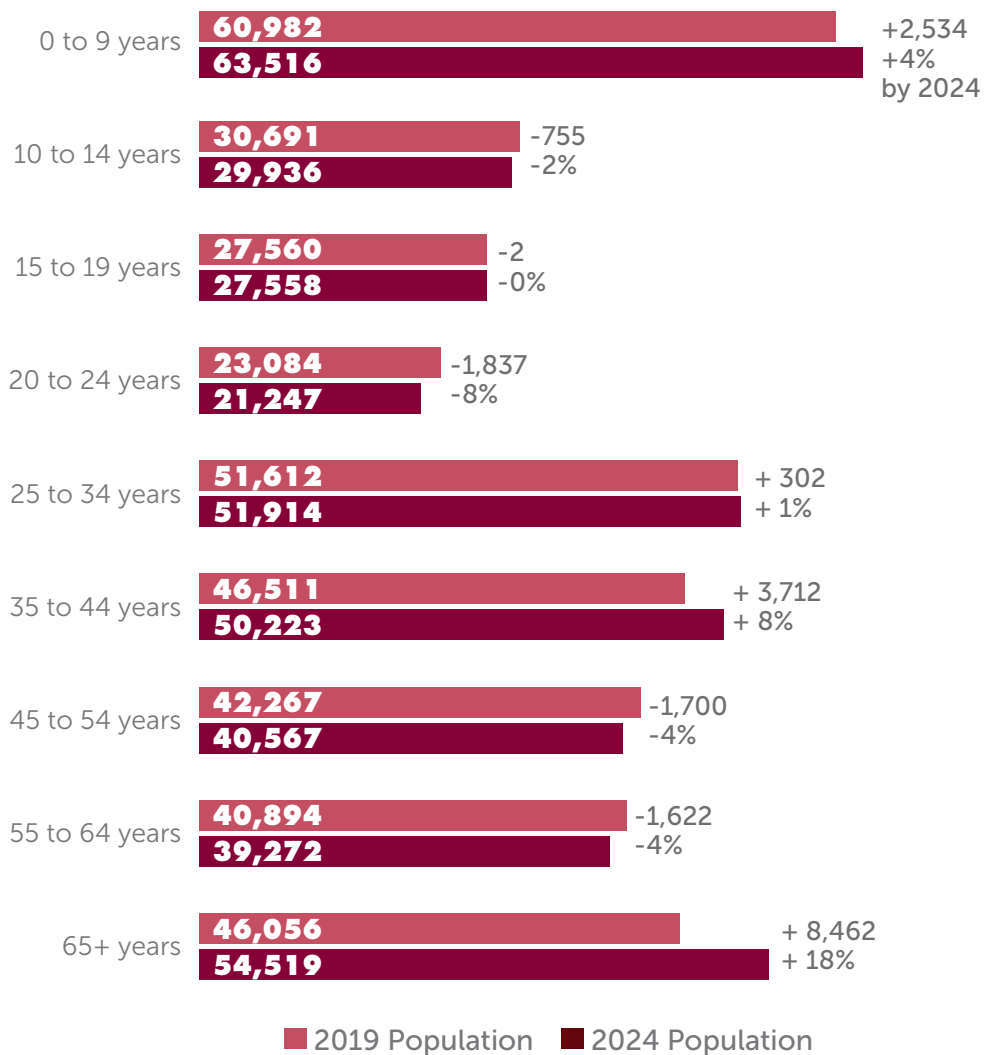
Age

Information on the age of residents helps indicate future enrollment needs in the Victor Valley College area. In 2019, residents age 9 years and younger represented about 16.5% of the Victor Valley College area’s population. This group is expected to increase by 4.2% by 2024, nearly twice as fast as the overall population with a growth rate of 2.5%. This may indicate a potential influx of students for the college within the next 20 years. The 10-to-14-year-old age group, those who may enter college in the next six to 10 years, is expected to decline 2% over the next five years. The 15-to-19-year-old age group, representing high school students and recent graduates, represents just over 7% of the population. Growth in this group is expected to remain flat through 2024.

The working-age population, ages 25 to 65 years, represented just under half (49.0%) of the area’s population in 2019. Over the next five years, the working-age population is expected to decline by 692 residents, shrinking by 0.4%.

The 65-years-and-older age group is projected to increase by 18% over the next five years, rising by 8,462 residents. Residents age 65 and older represent the fastest-growing age group in the Victor Valley College area.

Exhibit 5: Five-year growth, 2019 and 2024 population share by age group, Victor Valley College area

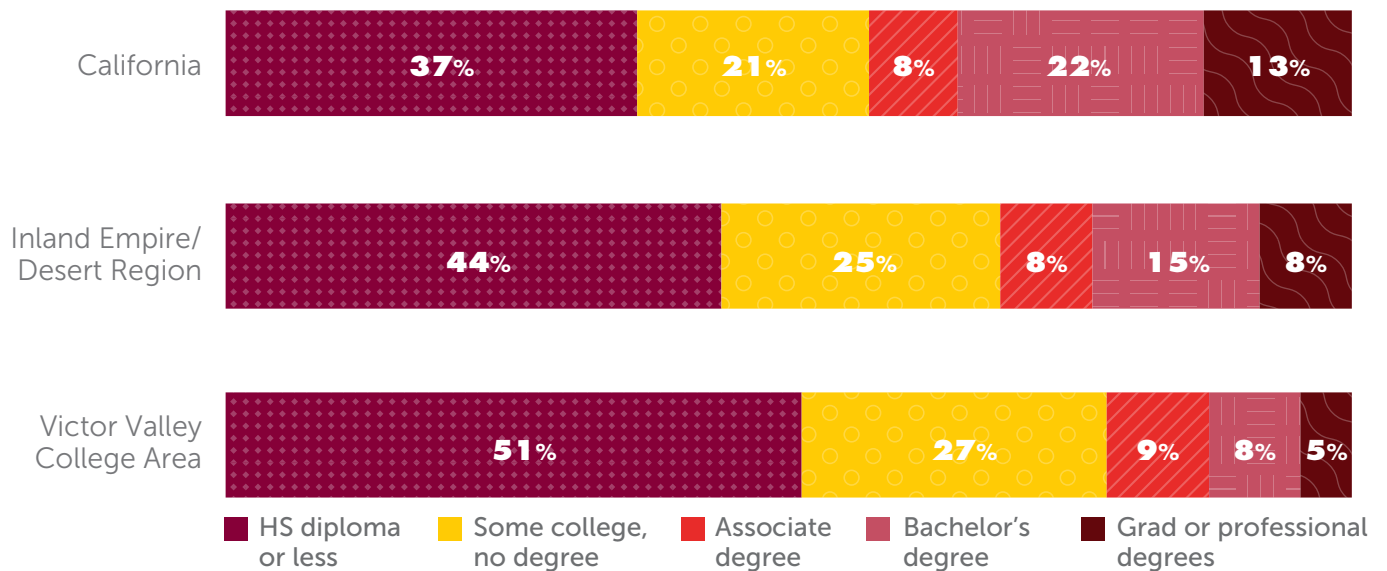


Source: Emsi 20.2

Educational Attainment

Educational attainment refers to the highest level of education that residents age 25 and older have completed. Just over half of residents in the Victor Valley College area have a high school diploma or less (51%), which is greater than the Inland Empire/Desert Region (44%), and considerably higher than California (37%) (Exhibit 6). The Victor Valley College area has a larger share of residents who are community college educated (which encompasses the categories of some college, no degree and associate degree) (36%) than the Inland Empire/Desert Region (33%), and California (29%). The Victor Valley College area has a significantly smaller share of residents with a bachelor's degree or higher (13%) than the Inland Empire/Desert Region (23%) and California (35%), representing an opportunity to increase the educational attainment of bachelor's degrees in the area.

Exhibit 6: Highest educational attainment of adults age 25 and older in the Victor Valley College area, Inland Empire/Desert Region, and California



Source: American Community Survey

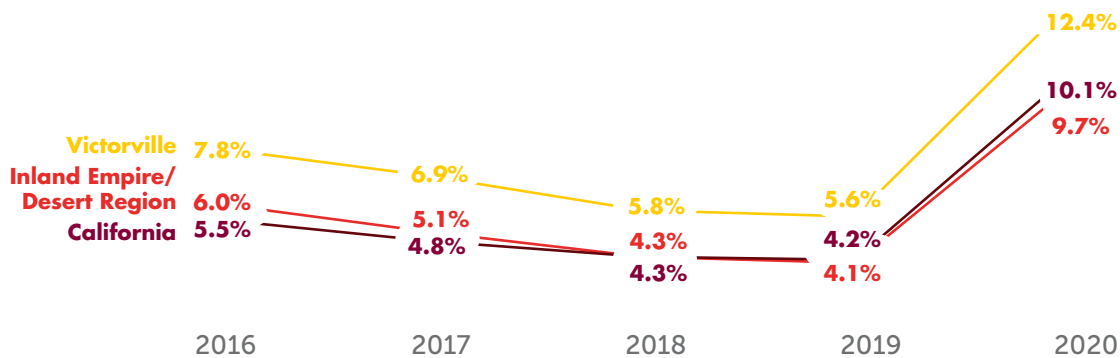


Labor Force and Unemployment Rate

Labor force data reflects the employment status of people by “place of residence.” A person is counted in the labor force by their residence, regardless of where their work is located. Over the last five years, the unemployment rate in the City of Victorville has been historically higher than the region and state (Exhibit 7). Prior to the COVID-19 pandemic, the unemployment rate had been trending downward since 2010, with the lowest unemployment rates since 1990 occurring in 2018 and 2019.

In 2016, the annual average unemployment rate in Victorville was 7.8%, the equivalent of 3,500 residents. By 2019, the unemployment rate fell to 5.6%, with the number of unemployed residents dropping to 2,600. Due to the impact of the COVID-19 pandemic, the unemployment rate in Victorville reached 12.4% in 2020, impacting 5,800 residents.

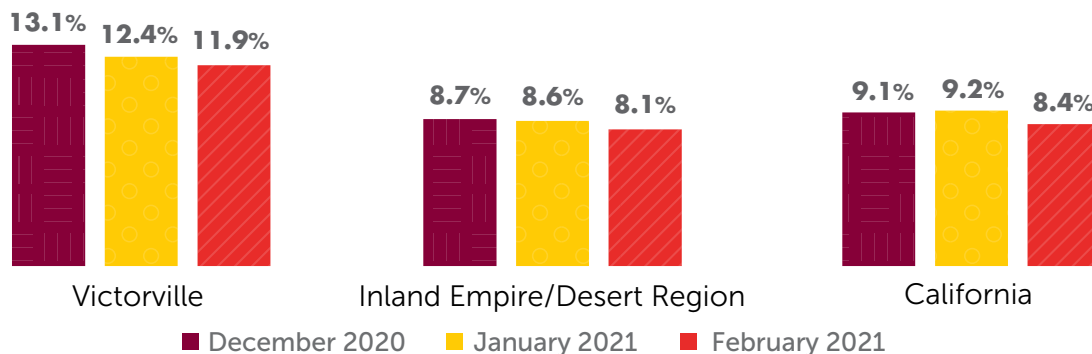
Exhibit 7: Annual average unemployment rate in Victorville, Inland Empire/Desert Region, and California (in percent)



Source: California Employment Development Department, Labor Market Information Division

The COVID-19 pandemic and subsequent economic shutdown in March 2020 resulted in a dramatic increase in the unemployment rate. Exhibit 8 displays the current unemployment rate for Victorville, the Inland Empire/Desert Region, and California from December 2020 through February 2021.

Exhibit 8: Unemployment Rate in Victorville, the Inland Empire/Desert Region, and California, December 2020-February 2021



Source: California Employment Development Department, Labor Market Information Division

INDUSTRY EMPLOYMENT AND BUSINESS ACTIVITY

In 2019, there were 89,014 jobs in the Victor Valley College area, accounting for approximately 6.4% of the total regional employment (Exhibit 9). Between 2019 and 2024, employment in the Victor Valley College area is projected to grow by 6.4%, adding 5,688 jobs. At 6.4%, the Victor Valley College area is projected to grow more slowly than the region overall, 8.4%, but at a similar rate as California, 6%.

Exhibit 9: Five-year industry employment projections for Victor Valley College area, Inland Empire/Desert region, and California

| | Victor Valley College Area | Inland Empire/ Desert Region | California |
|---------------------------|-----------------------------------|-------------------------------------|-------------------|
| 2019 Jobs | 89,014 | 1,747,341 | 20,003,848 |
| 2024 Jobs | 94,702 | 1,893,522 | 21,200,103 |
| Jobs Change | 5,688 | 146,181 | 1,196,255 |
| 2019-2024 % Change | 6.4% | 8.4% | 6% |

Source: Emsi 20.2

Using the North American Industry Classification System (NAICS), industries were ranked by their 2019 job count and projected job growth through 2024 (Exhibit 10). In 2019 the five major industries with the most jobs accounted for more than two-thirds (69.7%) of the total jobs in the college area:

- Government (20,758 jobs)
- Retail trade (13,138 jobs)
- Health care and social assistance (11,887 jobs)
- Accommodation and food services (9,303 jobs)
- Transportation and warehousing (6,917 jobs)

Over the next five years, area employers are expected to increase employment by 5,688 jobs, or 6.4%. The following five industries are projected to contribute 86.3% of the job growth in the area:

- Health care and social assistance (1,542 jobs added)
- Accommodation and food services (1,204 jobs)
- Government (937 jobs)
- Transportation and warehousing (891 jobs)
- Construction (336 jobs)

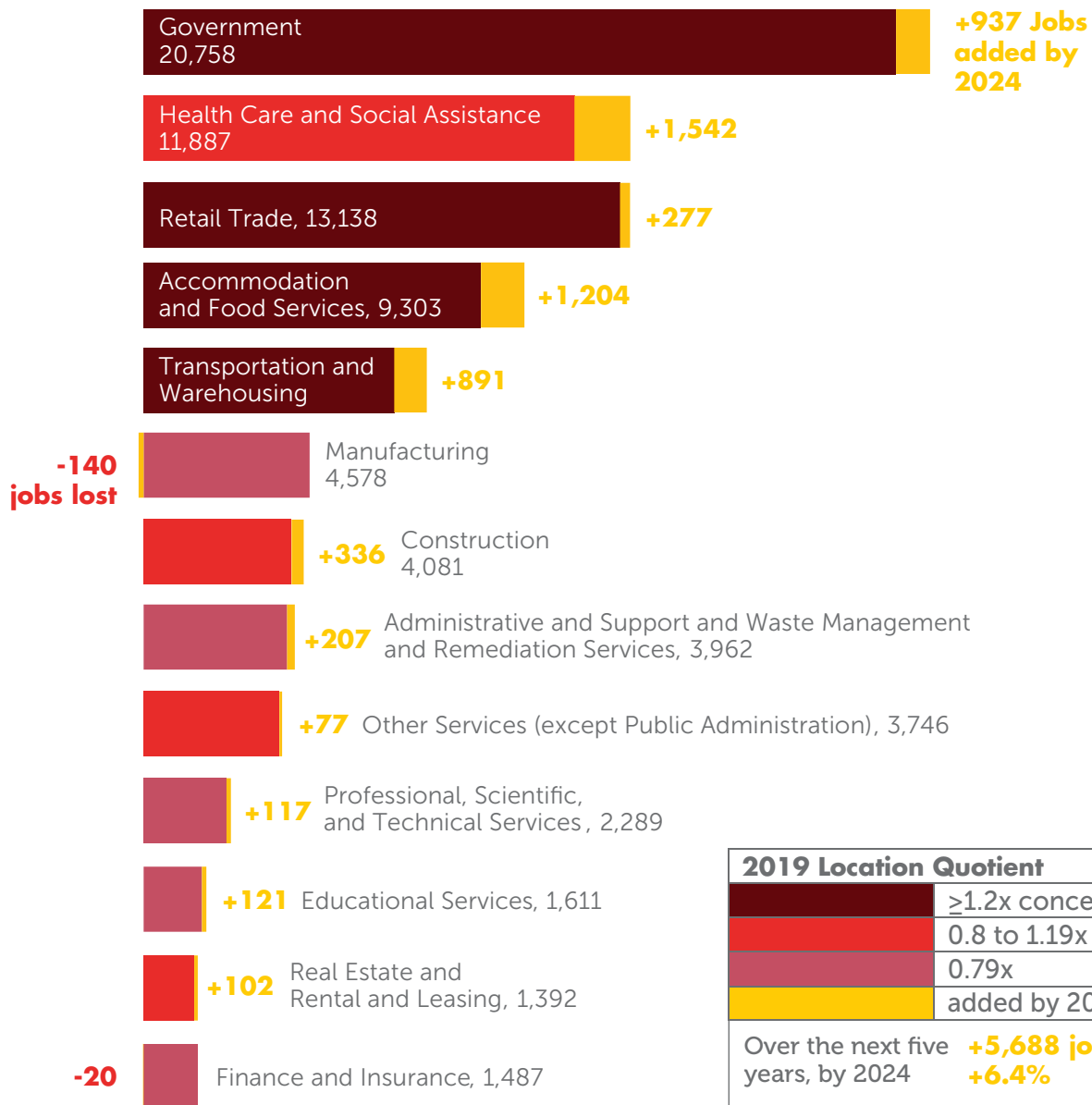
Exhibit 10 also displays the 2019 location quotient for each industry, which quantifies its concentration in the regional economy compared to the nation. A high location quotient (1.2 or greater) reveals industries that are particularly important to the area’s economy. Conversely, industries with a low location quotient (0.79 or less) are less concentrated in the region than the national average, indicating that job seekers are more likely to find jobs in these industries elsewhere.

The top five industries in terms of overall employment also have industry concentrations that are greater or equal to the national average, representing 70% of total jobs in the area (62,003 jobs out of 89,014 total jobs).

Major industry groups with fewer than 1,000 jobs in 2019, along with key industry terms, are displayed in Appendix C.

Exhibit 10: Major industries in the Victor Valley College area, number of jobs in 2019, and number of jobs added by 2024

Industry sector, number of jobs in 2019



Source: Emsi 20.2

OCCUPATIONAL EMPLOYMENT IN THE VICTOR VALLEY COLLEGE AREA

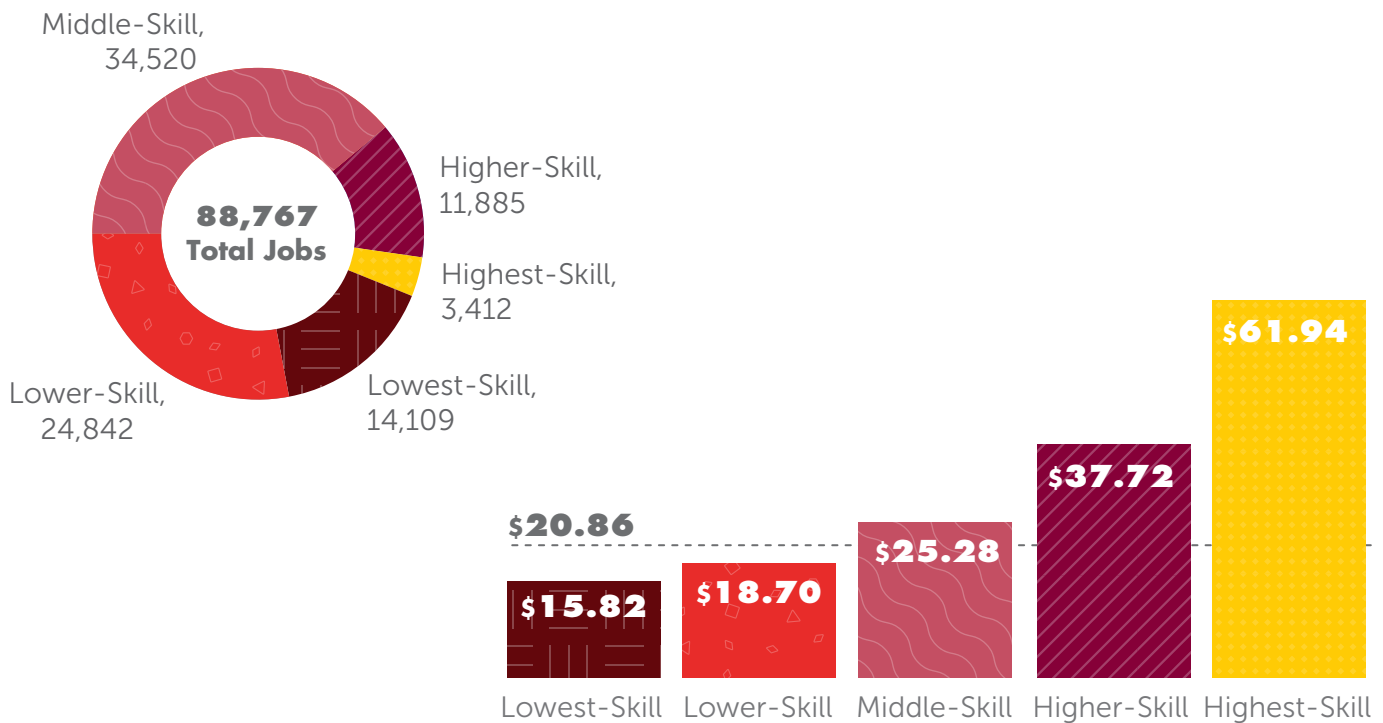
Occupational employment in the area was analyzed in terms of skill level. The California Community Colleges provide education and training that generally prepares students to enter middle-skill jobs. Middle-skill occupations typically require educational attainment beyond a high school diploma, but less than a four-year degree. Most middle-skill jobs offer a higher pay rate than lower-skill jobs, making them an excellent fit for community college students on a CE pathway toward in-demand careers that pay a living wage.

For this study, higher-skill jobs are those that require a bachelor’s degree. Focusing on higher-skill jobs demonstrates the types of jobs available to students after completing a transfer program to a four-year postsecondary institution. This assessment does not include occupations that typically require an education beyond a bachelor’s degree, such as physicians, lawyers, and most scientists. Military-specific occupations in the area were removed from further analysis (-248 jobs).

Of the 88,767 jobs in the Victor Valley College area in 2019, approximately 39% were classified as middle-skill jobs, 28% were lowest-skill, 16% were lower-skill, 13% were higher-skill, and 4% were highest-skill (Exhibit 11). Through 2024, employers expect to have 60,589 job openings to fill newly created positions as well as existing jobs that workers are permanently vacating (due to occupational transfers and retirements). While most of these opportunities will be in lower-skill and lowest skill occupations, 4,108 middle-skill openings are expected annually in the Victor Valley College area through 2024.

Community colleges also should ensure that their training programs lead to occupations with adequate annual job openings and self-sustaining earnings. 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, even if the job openings are lower in the Victor Valley College area. Occupations are considered high-wage if the median hourly wage meets or exceeds \$20.86 per hour. Exhibit 11 displays occupations by skill level and average hourly wage for each skill-level category.

Exhibit 11: Breakdown of total jobs in the Victor Valley College area by skill level with the associated average wage



Source: COE, Emsi 20.2

VICTOR VALLEY COLLEGE PROGRAM OFFERINGS BY CAREER EDUCATION INDUSTRY SECTOR

The California Department of Education (CDE) developed CE Model Curriculum Standards for grades 7 through 12 that categorize courses and programs into 15 sectors. The CE model sectors are not to be confused with the NAICS employment sectors in the previous section. The CE model provides a useful way to classify postsecondary CE offerings and connect career pathways from high school to college.

Victor Valley College currently offers programs within 14 of the 15 CDE sectors:

- Agriculture and Natural Resources
- Arts, Media, and Entertainment
- Building and Construction Trades
- Business and Finance
- Education, Child Development, and Family Services
- Energy, Environmental, and Utilities
- Engineering and Architecture
- Health Science and Medical Technology
- Hospitality, Tourism, and Recreation
- Information and Communication Technologies
- Manufacturing and Product Development
- Marketing, Sales, and Services
- Public Services
- Transportation

Exhibits 12 through 59 display local and regional annual job openings and regional median wages for each CDE sector. All occupational data is sourced from Emsi 20.2 and a crosswalk linking CDE sectors, TOP codes, and occupations developed by the Centers of Excellence for Labor Market Research. The occupations are separated into middle- and higher-skill employment opportunities. At the end of each CDE sector discussion, middle- and higher-skill job opportunities for which the college does not currently offer training programs are provided. Appendix D displays job openings for each occupation featured in this report.

This analysis details employment opportunities for **118 unique occupations**, yielding **2,918 annual job openings** within the Victor Valley College area. Nearly 73% of these job opportunities are middle-skill, totaling 2,115 annual job openings. While there are fewer higher-skill opportunities available in the area, these openings typically offer a higher wage.

There are additional employment opportunities in the Victor Valley College area for which there are currently no relevant training programs being offered. With the appropriate level of education and training, the Victor Valley College area's resident population could potentially explore an additional 788 job openings.





AGRICULTURE AND NATURAL RESOURCES SECTOR

Agriculture and natural resources coursework provides a foundation in agriculture. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in seven pathways. The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in agricultural business, agricultural mechanics, agriscience, animal science, forestry and natural resources, ornamental horticulture, and plant and soil science (Heuvel and Mooney).

Animal Science Pathway

In the animal science pathway, students explore the necessary elements, such as diet, genetics, habitat, and behavior, to create humane, ecologically, and economically sustainable animal production systems. This includes the study of animal anatomy and physiology, nutrition, reproduction, genetics, health and welfare, animal production, technology, and the management and processing of animal products and by-products.

Victor Valley College programs:

- Agricultural Animal Science
- Animal Health Technician
- Animal Science Specialist
- Equine Science Specialist

Exhibit 12: Animal science middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Farmers, Ranchers, and Other Agricultural Managers | 16 | 2 | 230 | \$21.41 |
| Veterinary Technologists and Technicians | 71 | 9 | 90 | \$14.72 |
| First-Line Supervisors of Farming, Fishing, and Forestry Workers | <10 | 1 | 79 | \$22.73 |

Ornamental Horticulture Pathway

The ornamental horticulture pathway prepares students for careers in the nursery, landscaping, and floral industries. Topics include plant identification, plant physiology, soil science, plant reproduction, nursery production, and floriculture, as well as landscaping design, installation, and maintenance.

Victor Valley College programs:

- Environmental Horticulture
- Floral Design Technician
- Horticulture Specialist
- Landscape Specialist

Exhibit 13: Ornamental horticulture middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | 40 | 5 | 267 | \$22.64 |
| Floral Designers | 21 | 2 | 52 | \$16.78 |

Plant and Soil Science Pathway

The plant and soil science pathway covers topics such as plant classification, physiology, reproduction, plant breeding, biotechnology, and pathology. In addition, students learn about soil management, water, pests, and equipment, as well as cultural and harvest practices. "Insf. Data" indicates that there are too few of jobs in the college area to provide an accurate projection estimate.

Victor Valley College programs:

- Agricultural Plant Science
- Plant Science

Exhibit 14: Plant and soil science middle-skill occupation

| Middle-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Agricultural and Food Science Technicians | <10 | Insf. Data | 36 | \$21.36 |

Exhibit 15: Plant and soil science higher-skill occupation

| Higher-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Soil and Plant Scientists | <10 | Insf. Data | 18 | \$29.81 |





ARTS, MEDIA, AND ENTERTAINMENT SECTOR

Arts, media, and entertainment coursework provides students with the necessary skills to function in the media-rich 21st century (Edmonds and Mitchel). Students enrolled in these programs will learn skills that lead to creative, audio/video, and performance occupations. These opportunities may require that students move or travel outside of the region for work.

Design, Visual, and Media Arts Pathway

The design, visual, and media arts pathway includes those occupations that use visual art, digital media, and web-based tools and materials as the primary means of communication and expression. This career pathway requires the development of knowledge and skills in both visual art concepts as well as new and emerging digital processes by which individuals are able to create and communicate complex concepts in a broad range of occupations and professions.

Victor Valley College programs:

- Digital Animation Technician I 3DS Max
- Digital Animation Technician I Maya
- Digital Animation Artist 3DS Max
- Digital Animation Artist Maya
- Expanded Animation Technician 3DS Max
- Expanded Animation Technician Maya
- Photography

Exhibit 16: Design, visual, and media arts middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|----------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Graphic Designers | 63 | 7 | 255 | \$20.71 |
| Photographers | 43 | 4 | 146 | \$20.05 |
| Multimedia Artists and Animators | 12 | Insf. Data | 36 | \$15.36 |



Production and Managerial Arts Pathway

Whatever the form or medium of creative expression, all careers in the Arts, Media, and Entertainment CDE sector require “publication” or a public presentation in one way or another. Consequently, the production and managerial arts pathway focuses on both the technical skills and the organizational and managerial knowledge necessary to bring arts, media, and entertainment to the public.

Victor Valley College program:

- Digital Filmmaker

Exhibit 17: Production and managerial arts middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---------------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Audio and Video Equipment Technicians | 28 | 3 | 87 | \$18.65 |
| Sound Engineering Technicians | <10 | 0 | 17 | \$15.10 |

Exhibit 18: Production and managerial arts higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Producers and Directors | 18 | 2 | 58 | \$30.34 |
| Film and Video Editors | <10 | 1 | 25 | \$40.40 |
| Art Directors | 20 | 2 | 100 | \$24.62 |





BUILDING AND CONSTRUCTION TRADES SECTOR

Programs related to the Building and Construction Trades CDE sector equip students with the technical skills needed to transition to postsecondary training or a construction trade. The sector encompasses four career pathways: cabinetry, millwork and woodworking; engineering and heavy construction; mechanical systems installation and repair; and residential and commercial construction. These pathways emphasize processes, systems, and the way in which structures are built (McCabe and Dunn).

Cabinetry, Millwork, and Woodworking Pathway

The cabinetry, millwork, and woodworking pathway prepares students for careers in cabinet construction, millwork, finish carpentry, and furniture making for both production and custom products.

Victor Valley College program:

- Basic Woodworking

Exhibit 19: Cabinetry, millwork, and woodworking middle-skill occupation

| Middle-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|-------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Carpenters | 672 | 74 | 2,591 | \$22.93 |

Mechanical Systems Installation and Repair Pathway

The mechanical systems installation and repair pathway prepares students for employment or advanced training in heating, ventilation, and air-conditioning (HVAC); and appliance installation, maintenance, and repair. The pathway includes preparation for a Class C California License and EPA certification.

Victor Valley College programs:

- Basic HVAC/R
- Basic Residential Maintenance Technician

Exhibit 20: Mechanical systems installation and repair middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Heating, Air Conditioning, and Refrigeration Mechanics and Installers | 155 | 21 | 572 | \$19.96 |
| First-Line Supervisors of Mechanics, Installers, and Repairers | 257 | 27 | 500 | \$33.91 |

Residential and Commercial Construction Pathway

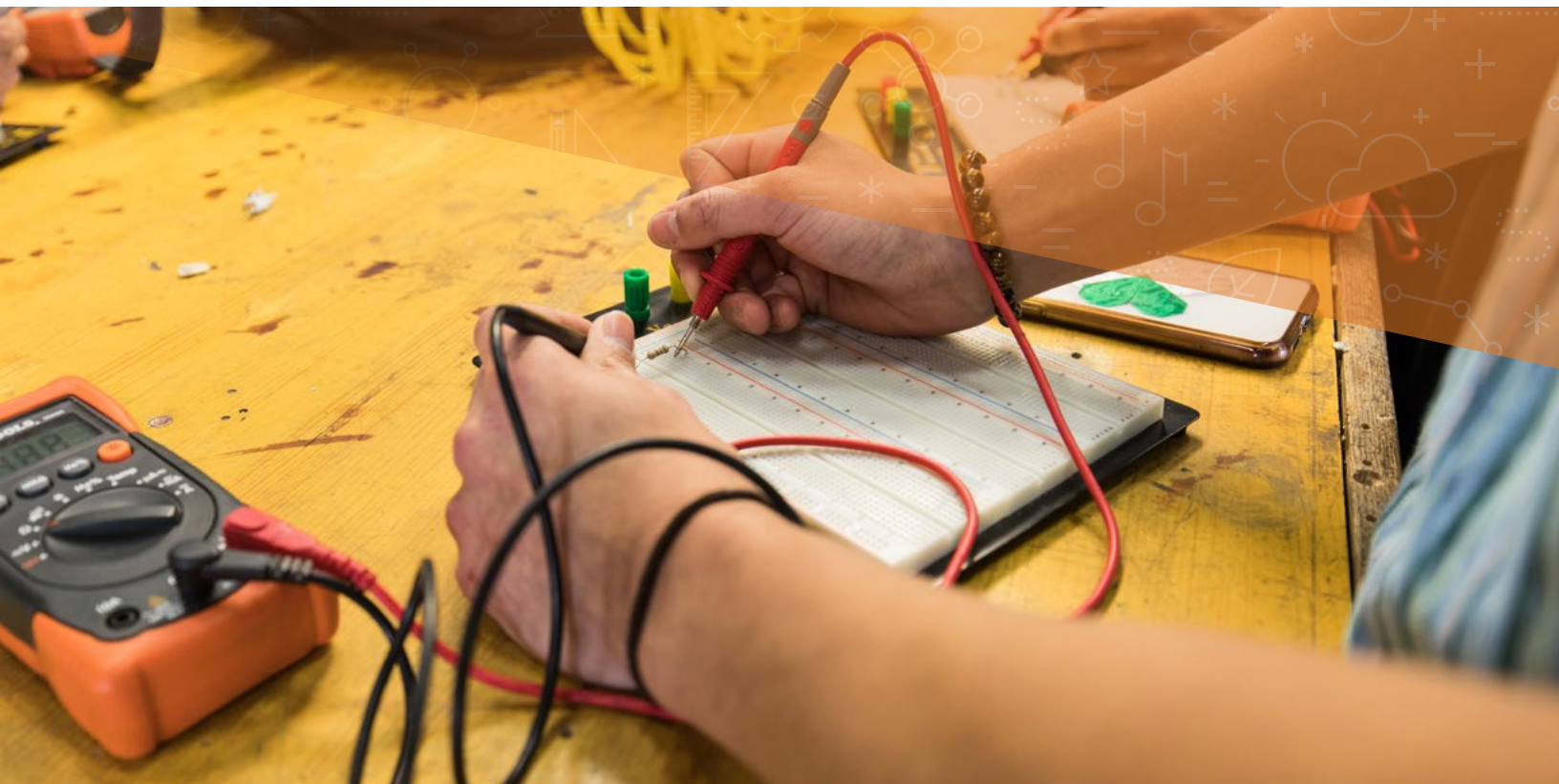
The residential and commercial construction pathway provides preparation for careers in construction, building design, performance, and sustainability. The pathway includes instruction on how these structures are built.

Victor Valley College programs:

- Basic Electrician Technician
- Building Construction
- Building Inspection
- Construction Management
- Construction Technology
- Plumbing Technician

Exhibit 21: Residential and commercial construction middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Electricians | 277 | 42 | 1,365 | \$24.28 |
| First-Line Supervisors of Construction Trades and Extraction Workers | 286 | 35 | 1,000 | \$32.24 |
| Plumbers, Pipefitters, and Steamfitters | 242 | 35 | 983 | \$24.48 |
| Construction Managers | 193 | 16 | 482 | \$32.46 |
| Construction and Building Inspectors | 62 | 9 | 164 | \$40.80 |





BUSINESS AND FINANCE SECTOR

Students participating in business and finance programs gain skills that apply to nearly every employer, career path, and industry sector (McCabe, Ferrier, and Yates). These programs prepare students for multiple pathways, including business management, financial services (such as accounting, banking, and investing), and international business careers.

Business Management Pathway

In the business management pathway, students learn entrepreneurship and business fundamentals, goal-setting, resource allocation, organizational structure and management techniques, economics, financial data, risk management, information technology, and supply chain management. Programs in this pathway train eight middle-skill occupations that have a combined total of 292 annual job openings in the Victor Valley College area.

Victor Valley College programs:

- Administrative Assistant
- Business
- Business Administration
- Business Education Technologies
- Data Typist
- Management
- Office Services
- Spreadsheet Processor
- Word Processor

Exhibit 22: Business management middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | 1,191 | 136 | 2,760 | \$18.58 |
| First-Line Supervisors of Office and Administrative Support Workers | 777 | 88 | 1,750 | \$26.41 |
| Executive Secretaries and Executive Administrative Assistants | 183 | 20 | 397 | \$28.13 |
| Administrative Services Managers | 132 | 13 | 259 | \$47.33 |
| Training and Development Specialists | 103 | 13 | 290 | \$27.60 |
| Payroll and Timekeeping Clerks | 101 | 12 | 238 | \$22.56 |
| Data Entry Keyers | 71 | 8 | 199 | \$15.26 |
| Compensation, Benefits, and Job Analysis Specialists | 22 | 2 | 50 | \$32.85 |

Exhibit 23: Business management higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| General and Operations Managers | 892 | 94 | 2,162 | \$48.54 |
| Managers, All Other | 448 | 40 | 920 | \$34.61 |
| Management Analysts | 272 | 29 | 679 | \$37.83 |
| Compliance Officers | 183 | 19 | 274 | \$35.37 |
| Chief Executives | 116 | 9 | 204 | \$78.12 |
| Labor Relations Specialists | 26 | 3 | 57 | \$31.26 |

Financial Services Pathway

Financial services are an essential aspect of every business institution and organization. Students in this pathway investigate the field of financial management, including how it is impacted by industry standards as well as economic, financial, technological, international, social, legal, and ethical factors. Students formulate and interpret financial information for use in financial management decision making, such as compliance and risk management. This pathway may include programs of study for accounting, banking, securities and investments, and other financial specializations (McCabe, Ferrier, Yates). Victor Valley College's bookkeeping program prepares students for direct employment in one middle-skill occupation with 94 annual job openings in the Victor Valley College area and 2,079 annual job openings in the Inland Empire/Desert Region.

Victor Valley College program:

- Bookkeeping I

Exhibit 24: Financial services middle-skill occupation

| Middle-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Bookkeeping, Accounting, and Auditing Clerks | 770 | 94 | 2,079 | \$19.60 |

Exhibit 25: Financial services higher-skill occupation

| Higher-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Accountants and Auditors | 399 | 43 | 934 | \$33.75 |

Additional Business and Finance Training Opportunities

Future program development by Victor Valley College may focus on the following occupations related to human resources and labor relations. These occupations have a combined total of 56 annual job openings in the Victor Valley College area and 1,302 annual job openings in the Inland Empire/Desert Region.

Exhibit 26: Business and finance training opportunities

| Business and Finance Training Opportunities (Higher-skill) | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Human Resources Specialists | 217 | 25 | 607 | \$29.60 |
| Financial Managers | 203 | 19 | 421 | \$53.14 |
| Personal Financial Advisors | 72 | 6 | 122 | \$36.52 |
| Human Resources Managers | 63 | 6 | 152 | \$54.47 |





EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES SECTOR

Education and training in this CDE sector provide students with the skills needed to pursue a career in childcare, family, or social services or become teachers (Heuvel and Ford). Students enrolled in these programs will be qualified to enter the occupations listed below, many of which are higher-skill careers that are in high demand by employers. This industry sector has four pathways: child development, consumer services, education, and family and human services. This sector's programs lead to 13 unique middle- and higher-skill occupations with a combined total of 833 annual job openings in the Victor Valley College area. An additional 104 openings are available with the expansion of program offerings in this sector.

Child Development and Education Pathways

The child development pathway provides students with the training needed to enter middle-skill childcare jobs. The education pathway provides foundational training for future educators, many of whom will require a four-year education and a state credential to enter employment. Programs in this pathway train four middle-skill occupations that have a combined total of 348 annual job openings in the Victor Valley College area. The majority of job opportunities in this pathway are for higher-skill occupations.

Victor Valley College programs:

- Child Development
- Early Childhood Education
- Level I: Associate Teacher
- Level II: Teacher (Pre-school)
- Level III: Site Supervisor (Pre-school)

Exhibit 27: Child development and education middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Teacher Assistants | 1,634 | 192 | 2,469 | \$16.84 |
| Childcare Workers | 849 | 126 | 2,008 | \$12.04 |
| Preschool Teachers, Except Special Education | 235 | 27 | 413 | \$14.36 |
| Special Education Teachers, Preschool | 36 | 3 | 51 | \$12.07 |



Exhibit 28: Child development and education higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Elementary School Teachers, Except Special Education | 1,863 | 162 | 1,962 | \$42.88 |
| Substitute Teachers | 1,105 | 137 | 1,788 | \$18.05 |
| Secondary School Teachers, Except Special and Career/Technical Education | 999 | 85 | 1,034 | \$40.49 |
| Teachers and Instructors, All Other | 278 | 36 | 615 | \$16.79 |
| Middle School Teachers, Except Special and Career/Technical Education | 298 | 30 | 352 | \$39.99 |
| Special Education Teachers, Kindergarten and Elementary School | 180 | 16 | 203 | \$37.82 |
| Kindergarten Teachers, Except Special Education | 101 | 12 | 144 | \$34.17 |
| Education Administrators, Preschool and Childcare Center/Program | 39 | 3 | 55 | \$18.27 |
| Special Education Teachers, Middle School | 36 | 4 | 46 | \$38.72 |

Additional Education, Child Development, and Family Services Training Opportunities

Future program development by Victor Valley College may focus on occupations related to the family and human services pathway. The occupations displayed below have a combined total of 104 annual job openings in the Victor Valley College area and 1,758 annual job openings in the Inland Empire/Desert Region.

Exhibit 29: Education, child development, and family service training opportunities

| Education, Child Development, and Family Services Training Opportunities, Higher-skill | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Substance Abuse, Behavioral Disorder, and Mental Health Counselors | 217 | 32 | 532 | \$21.24 |
| Social Workers, All Other | 147 | 17 | 263 | \$33.84 |
| Social and Community Service Managers | 71 | 9 | 249 | \$30.62 |
| Child, Family, and School Social Workers | 114 | 15 | 234 | \$25.85 |
| Instructional Coordinators | 123 | 13 | 201 | \$49.62 |
| Special Education Teachers, Secondary School | 98 | 9 | 114 | \$43.18 |
| Community and Social Service Specialists, All Other | 66 | 9 | 165 | \$23.93 |



ENERGY, ENVIRONMENT, AND UTILITIES SECTOR

Students enrolled in coursework related to the Energy, Environment, and Utilities CDE sector gain real-world, occupationally relevant knowledge, skills, and experiences in environmental resources, energy and power technology, and telecommunications (McCabe and Yates).

Energy and Power Technology Pathway

The energy and power technology pathway provides learning opportunities for students pursuing careers in the energy and power industries.

Victor Valley College programs:

- Photovoltaic Technician
- Renewable Energy

Exhibit 30: Energy and power technology middle-skill occupation

| Middle-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|-------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Solar Photovoltaic Installers | <10 | 1 | 52 | \$19.15 |

Additional Energy, Environment, and Utilities Training Opportunities

Future program development by Victor Valley College may focus on occupations related to the environmental resources and telecommunications pathways. These occupations have a combined total of 53 annual job openings in the Victor Valley College area and 876 annual job openings in the Inland Empire/Desert Region.

Exhibit 31: Energy, environment, and utilities training opportunities

| Energy, Environment, and Utilities Training Opportunities (Middle-skill) | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Telecommunications Equipment Installers and Repairers, Except Line Installers | 241 | 27 | 403 | \$26.71 |
| Water and Wastewater Treatment Plant and System Operators | 106 | 10 | 146 | \$32.87 |
| Electrical Power-Line Installers and Repairers | 76 | 8 | 148 | \$35.93 |
| Telecommunications Line Installers and Repairers | 68 | 8 | 179 | \$25.59 |



ENGINEERING AND ARCHITECTURE SECTOR

The Engineering and Architecture CDE sector provides academic and technical preparation and focuses on career awareness, career exploration, and career preparation in four pathways: architectural design, engineering technology, engineering design, and environmental engineering (McCabe and Dunn).

Architectural Design Pathway

The architectural design pathway provides learning opportunities for students interested in preparing for careers in such areas as architecture, industrial design, and civil engineering.

Victor Valley College programs:

- Architectural CADD Technician I
- Architectural Drafting and Design
- CADD Technician I
- Drafting Technician
- Engineering Drafting and Design
- Public Works

Exhibit 32: Architectural design middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Architectural and Civil Drafters | 39 | 5 | 123 | \$27.44 |
| Engineering Technicians, Except Drafters, All Other | 46 | 4 | 86 | \$34.76 |
| Civil Engineering Technicians | 30 | 3 | 67 | \$29.74 |
| Industrial Engineering Technicians | 18 | 2 | 48 | \$29.48 |
| Mechanical Drafters | 17 | 2 | 53 | \$24.37 |

Exhibit 33: Architectural design higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Civil Engineers | 116 | 11 | 285 | \$52.01 |
| Architects, Except Landscape and Naval | 40 | 5 | 102 | \$35.82 |
| Architectural and Engineering Managers | 51 | 4 | 101 | \$70.20 |

Additional Engineering and Architecture Training Opportunities

Future program development by Victor Valley College may focus on the following occupations related to the engineering technology and engineering design pathways. While the combined total of annual job openings for these occupations is low in the college area, there are a combined total of 242 annual job openings in the region.

Exhibit 34: Engineering and architecture training opportunities

| Engineering and Architecture Training Opportunities (Higher-skill) | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Mechanical Engineers | 59 | 4 | 123 | \$40.53 |
| Industrial Engineers | 48 | 4 | 119 | \$38.44 |





HEALTH SCIENCE AND MEDICAL TECHNOLOGY SECTOR

Students enrolled in coursework related to the Health Science and Medical Technology CDE sector will gain technical skills and effective methods for the safe delivery of health care (McCabe, Beck). The six pathways in this sector are biotechnology, patient care, health care administrative services, health care operational support services, public and community health, and mental and behavioral health.

Health Care Administrative Services Pathway

Health care administrative workers include site administrators, managers, attorneys, receptionists, secretaries, billing and coding specialists, health informatics technicians, accountants, managers, and other workers that support the process of patient care. Health care administrative workers are the invisible backbone of health care; without appropriately skilled workers in these fields, health care systems simply could not function.

Victor Valley College programs:

- Medical Assistants
- Medical Office

Exhibit 35: Health care administrative services middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Medical Assistants | 524 | 64 | 1,287 | \$15.23 |
| Medical Secretaries | 460 | 60 | 1,095 | \$17.40 |
| Medical Records and Health Information Technicians | 122 | 9 | 184 | \$22.44 |
| Medical Transcriptionists | 25 | 4 | 73 | \$17.46 |



Patient Care Pathway

The patient care pathway provides training in the prevention, treatment, and management of illness, including mental health and physical well-being.

Victor Valley College programs:

- Kinesiology
- Nursing
- Nursing Licensure
- Respiratory Therapy

Exhibit 36: Patient care middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Registered Nurses | 1,910 | 141 | 2,616 | \$47.45 |
| Nursing Assistants | 576 | 83 | 1,311 | \$15.62 |
| Respiratory Therapists | 111 | 8 | 150 | \$35.39 |

Additional Health Science and Medical Technology Training Opportunities

Future program development by Victor Valley College may focus on the following occupations related to the biotechnology, health care operational support services, mental and behavioral health, and patient care pathways. These training opportunities have a combined total of 134 annual job openings in the Victor Valley College area and 2,325 annual job openings in the Inland Empire/Desert Region.

Exhibit 37: Health science and medical technology training opportunities

| Health Science and Medical Technology Training Opportunities, Middle-skill unless noted | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Licensed Vocational Nurses | 516 | 51 | 809 | \$25.10 |
| Medical and Health Services Managers (Higher-skill) | 193 | 21 | 401 | \$56.33 |
| Dental Hygienists | 125 | 14 | 186 | \$45.41 |
| Healthcare Support Workers, All Other | 111 | 14 | 208 | \$21.26 |
| Clinical Laboratory Technologists and Technicians | 100 | 9 | 194 | \$24.72 |
| Radiologic Technologists | 92 | 6 | 140 | \$36.03 |
| Psychiatric Technicians | 81 | 7 | 149 | \$34.62 |
| Surgical Technologists | 58 | 6 | 135 | \$27.39 |
| Physical Therapist Assistants | 28 | 6 | 103 | \$34.61 |



HOSPITALITY, TOURISM, AND RECREATION SECTOR

Coursework aligned with the Hospitality, Tourism, and Recreation CDE sector prepares students to enter food service, recreation, and hospitality employment (Heuvel and Wright).

Food Service and Hospitality Pathway

The food service and hospitality pathway focuses on the key aspects of the industry. Students pursuing this career pathway gain in-depth, hands-on experiences that emphasize industry awareness; sanitation, and safe food handling; food and beverage production; nutrition; food service management; and customer service.

Victor Valley College program:

- Restaurant Management

Exhibit 38: Food service and hospitality middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| First-Line Supervisors of Food Preparation and Serving Workers | 642 | 125 | 1,908 | \$14.94 |
| Food Service Managers | 272 | 37 | 653 | \$20.87 |
| Chefs and Head Cooks | 80 | 12 | 252 | \$20.24 |

Additional Hospitality, Tourism, and Recreation Training Opportunities

Future program development by Victor Valley College may focus on the following occupations related to the food science, dietetics, nutrition and hospitality, and tourism, and recreation pathways. These occupations have a combined total of 13 annual job openings in the Victor Valley College area and 271 job openings in the Inland Empire/Desert Region.

Exhibit 39: Hospitality, tourism, and recreation training opportunities

| Hospitality, Tourism, and Recreation Training Opportunities, Middle-skill, Unless Noted | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| First-Line Supervisors of Gaming Workers | 76 | 9 | 146 | \$27.77 |
| Meeting, Convention, and Event Planners (Higher-Skill) | 30 | 4 | 125 | \$22.96 |



INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

Information and communication technologies CDE sector programs prepare students to meet the rapid changes in computer, networking, and software fields. Although most employers in this sector seek candidates with a bachelor's degree, job opportunities also exist for those with a community college education (McCabe and Page). This sector contains the information support and services; networking, software and systems development; and game and simulation pathways. Victor Valley College provides programs in the information support and services pathway that leads to high-wage, high-growth job opportunities. This sector's programs train nine middle- and higher-skill occupations with a combined total of 67 annual job openings in the Victor Valley College area and 1,618 annual job openings in the Inland Empire/Desert Region.

Information Support and Services Pathway

This pathway prepares students for careers that involve the implementation of computer services and software, support of multimedia products and technical services, and the administration of information and communication systems. This pathway prepares students for employment in one middle-skill occupation with 17 annual job openings in the Victor Valley College area and 390 annual job openings in the Inland Empire/Desert Region.

Victor Valley College programs:

- Computer Information Systems
- Computer Systems I
- Computer Systems II
- Electronics and Computer Technology
- MySQL Database Developer
- UNIX Administrator

Exhibit 40: Information support and services middle-skill occupation

| Middle-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|-----------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Computer User Support Specialists | 170 | 17 | 390 | \$26.11 |

Exhibit 41: Information support and services higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Computer Systems Analysts | 84 | 8 | 186 | \$39.87 |
| Computer and Information Systems Managers | 66 | 7 | 152 | \$68.15 |
| Database Administrators | 26 | 2 | 49 | \$46.72 |

Networking Pathway

The networking pathway prepares students for careers that involve network analysis, planning, and implementation, including the design, installation, maintenance, and management of network systems. Victor Valley College’s networking program prepares students for employment in two middle-skill occupations seven collective annual job openings in the Victor Valley College area and 147 annual job openings in the Inland Empire/Desert Region.

Victor Valley College program:

- Network Specialist

Exhibit 42: Networking middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--------------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Computer Network Support Specialists | 54 | 5 | 108 | \$28.00 |
| Computer Network Architects | 21 | 2 | 39 | \$49.65 |

Exhibit 43: Networking higher-skill occupation

| Higher-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Network and Computer Systems Administrators | 85 | 7 | 158 | \$38.48 |

Software and Systems Development Pathway

The software and systems development pathway prepares students for careers related to computer science that involves the design, development, implementation, maintenance, and management of systems that rely on software programs to satisfy the operational needs of modern business organizations.

Victor Valley College programs:

- Programming I
- Web Authoring

Exhibit 44: Software and systems development middle-skill occupation

| Middle-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|-------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Web Developers | 39 | 4 | 109 | \$24.36 |

Exhibit 45: Software and systems development higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---------------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Software Developers, Applications | 75 | 8 | 237 | \$48.70 |
| Software Developers, Systems Software | 39 | 4 | 118 | \$48.83 |
| Computer Programmers | 34 | 3 | 72 | \$40.36 |



MANUFACTURING AND PRODUCT DEVELOPMENT SECTOR

The manufacturing and product development CDE sector provides a foundation for secondary education students in California in manufacturing processes and systems, including graphic design production, machine tooling and forming, welding and materials joining, and product innovation and design. Students can explore this sector via the following pathways: graphic production technologies, machining and forming technologies, welding and materials joining, and product innovation and design. This sector trains 13 middle- and higher-skill occupations with a combined total of 156 annual job openings in the Victor Valley College area and 3,617 annual job openings in the Inland Empire/Desert Region.

Machine and Forming Technologies Pathway

The machine and forming technologies pathway provides students with education and training for occupations related to machine tools and manufacturing processes. The machine and forming technologies program offered at Victor Valley College prepares students for employment in three middle-skill occupations with a collective 19 annual job openings in the Victor Valley College area and 542 annual job openings in the Inland Empire/Desert Region.

Victor Valley College program:

- Basic Machining

Exhibit 46: Machine and forming technologies middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Machinists | 140 | 15 | 411 | \$19.27 |
| Computer-Controlled Machine Tool Operators, Metal and Plastic | 34 | 3 | 102 | \$17.92 |
| Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic | <10 | 1 | 29 | \$29.07 |

Product Innovation and Design Pathway

The product innovation and design pathway provides students with an understanding of the design and manufacturing technologies common to careers in the fields of product design and manufacturing. Representative topics include the product design and development process, the principles of design, computer-aided design, fabrication and manufacturing processes, sustainability, and the principles of business, entrepreneurship and global design.

Victor Valley College program:

- Electronics Engineering Technology: Electronics Emphasis

Exhibit 47: Product innovation and design middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Maintenance and Repair Workers, General | 752 | 87 | 1,684 | \$19.84 |
| Electrical and Electronics Engineering Technicians | 54 | 5 | 107 | \$29.45 |
| Electrical and Electronics Repairers, Commercial and Industrial Equipment | 37 | 4 | 70 | \$31.82 |

Exhibit 48: Product innovation and design higher-skill occupations

| Higher-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Electrical Engineers | 43 | 4 | 79 | \$42.26 |
| Electronics Engineers, Except Computer | 48 | 3 | 58 | \$53.83 |

Welding and Material Joining Pathway

Welding programs provide students with skills in the interpretation and layout of welded and assembled-part prints, cutting, bonding, and mechanical fastening. The skills taught in this program may also be used in the construction industry sector or any industry that requires metal maintenance. The welding program offered by Victor Valley College prepares students for employment in five middle-skill occupations with a combined total of 34 annual job openings in the Victor Valley College area and 1,077 annual job openings in the Inland Empire/Desert Region.

Victor Valley College program:

- Welding

Exhibit 49: Welding and material joining middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Welders, Cutters, Solderers, and Brazers | 138 | 16 | 439 | \$18.41 |
| Sheet Metal Workers | 65 | 9 | 261 | \$24.15 |
| Structural Iron and Steel Workers | 35 | 5 | 237 | \$32.33 |
| Structural Metal Fabricators and Fitters | 27 | 3 | 93 | \$16.85 |
| Reinforcing Iron and Rebar Workers | <10 | 1 | 47 | \$16.42 |

Additional Manufacturing and Product Development Training Opportunity

Program development by the college may focus on the following occupations related to the manufacturing and product development sector. While the following occupation five annual job openings in the Victor Valley College area and 132 annual job openings in the Inland Empire/Desert Region.

Exhibit 50: Manufacturing and product development training opportunity

| Manufacturing and Product Development Sector Training Opportunity, Middle-skill | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Industrial Production Managers | 70 | 5 | 132 | \$47.52 |



MARKETING, SALES, AND SERVICES SECTOR

Marketing, sales, and services coursework is designed to meet businesses' needs by providing students with communication, marketing, selling, and product management skills (McCabe and Ferrier). The three pathways in this sector are marketing, professional sales, and entrepreneurship/self-employment. Principles of promotion, selling, and communication are vital to this sector.

Professional Sales Pathway

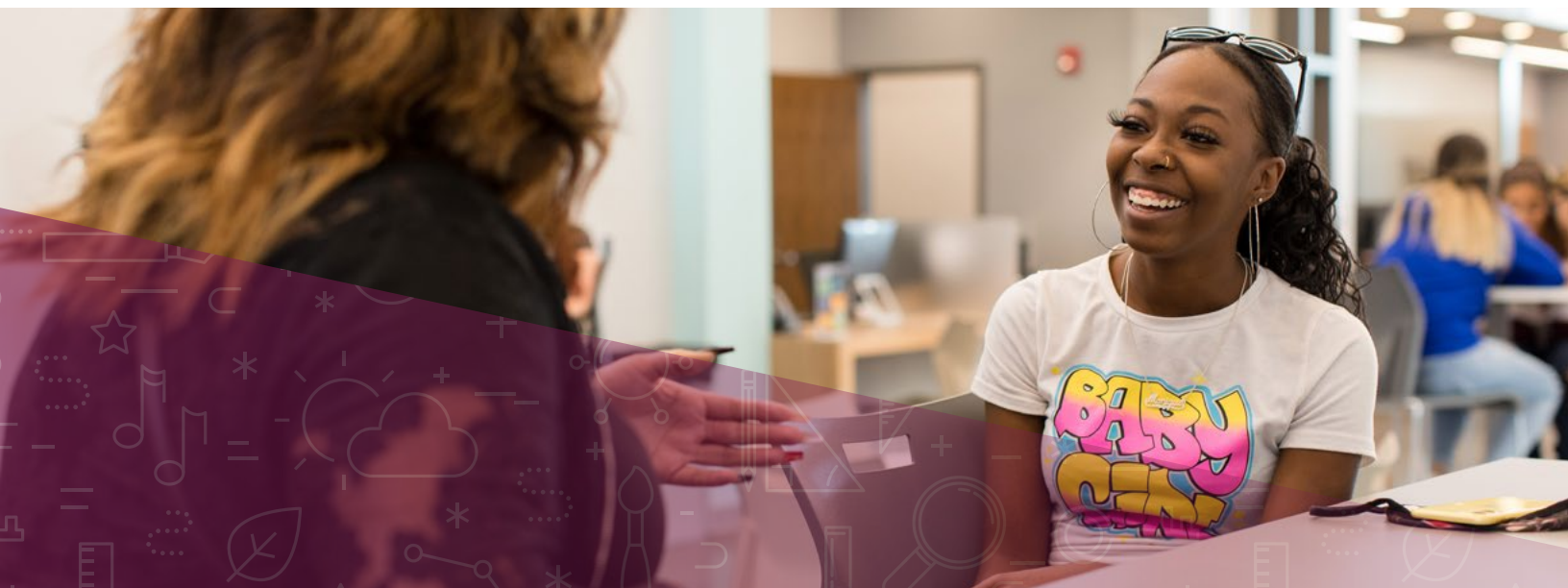
The professional sales pathway provides the foundational knowledge and skills needed in personal selling careers, including the fundamentals of personal selling with an emphasis on customer behavior; persuasive presentation of ideas, products and services; and developing sales goals. This pathway provides skills that prepare students for employment in four middle-skill occupations with a combined 50 annual job openings in the Victor Valley College area and 997 annual job openings in the Inland Empire/Desert Region.

Victor Valley College programs:

- Basic Business Real Estate
- Business Real Estate and Escrow
- Business Real Estate Apprentice

Exhibit 51: Professional sales middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Real Estate Sales Agents | 216 | 23 | 476 | \$26.42 |
| Property, Real Estate, and Community Association Managers | 159 | 15 | 289 | \$30.43 |
| Real Estate Brokers | 79 | 8 | 168 | \$37.66 |
| Appraisers and Assessors of Real Estate | 41 | 4 | 64 | \$28.30 |



Additional Marketing, Sales, and Services Training Opportunities

Future program development by Victor Valley College may focus on the following occupations related to the marketing, professional sales, and entrepreneurship/self-employment pathways. The following occupations have a combined total of 168 annual job openings in the Victor Valley College area and 5,242 annual job openings in the Inland Empire/Desert Region.

Exhibit 52: Marketing, sales, and services training opportunities

| Marketing, Sales, and Services Training Opportunities, Middle-skill, unless noted | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 330 | 38 | 1,777 | \$27.77 |
| Sales Representatives, Services, All Other | 427 | 61 | 1,437 | \$22.92 |
| Market Research Analysts and Marketing Specialists (Higher-skill) | 162 | 20 | 591 | \$26.18 |
| Sales Managers (Higher-skill) | 204 | 19 | 559 | \$43.00 |
| First-Line Supervisors of Non-Retail Sales Workers | 151 | 16 | 402 | \$24.90 |
| Public Relations Specialists (Higher-skill) | 56 | 7 | 177 | \$29.25 |
| Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products (Higher-skill) | 25 | 3 | 169 | \$34.64 |
| Marketing Managers (Higher-skill) | 42 | 4 | 130 | \$48.04 |





PUBLIC SERVICES SECTOR

Public services coursework includes public safety, emergency response, and legal practices (McCabe and Beck). The following pathways comprise this sector: public safety, emergency response, and legal practices. Victor Valley College offers nine programs related to public service, preparing students for employment in 12 middle-skill occupations.

Emergency Response Pathway

Coursework in the emergency response pathway prepares students for a number of careers in this field. The pathway provides the foundation for further professional education and training at a postsecondary level, leading to certification and employment. Students gain critical knowledge and skills through classroom and job-site experiences, simulations, and other learning modalities. Careers in this pathway include those in fire services, emergency medical services, wildland services, and emergency management. Programs in this pathway prepare students for employment in three middle-skill occupations with a combined total of 42 annual job openings in the Victor Valley College area and 573 annual job openings in the Inland Empire/Desert Region.

Victor Valley College programs:

- Emergency Medical Services
- Emergency Medical Technician
- Fire Fighter
- Fire Technology
- Paramedic

Exhibit 53: Emergency response middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|--|------------------------|----------------------------------|------------------------------|----------------------|
| Emergency Medical Technicians and Paramedics | 248 | 23 | 280 | \$15.49 |
| Firefighters | 192 | 17 | 269 | \$30.40 |
| First-Line Supervisors of Fire Fighting and Prevention Workers | 16 | 2 | 24 | \$45.26 |



Legal Practices Pathway

The legal practices pathway prepares students with a broad-based foundation of knowledge pertaining to the various types of law and legal practice and provides a foundation of basic skills necessary at all levels in the legal professions.

Victor Valley College program:

- Paralegal Studies

Exhibit 54: Legal practices middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|----------------------------------|------------------------|----------------------------------|------------------------------|----------------------|
| Paralegals and Legal Assistants | 83 | 11 | 262 | \$27.46 |
| Legal Secretaries | 55 | 6 | 152 | \$25.39 |
| Legal Support Workers, All Other | 39 | 4 | 51 | \$25.83 |

Public Safety Pathway

This pathway is designed for students who want to pursue a career in law enforcement or related public safety occupations. The public safety programs at Victor Valley College prepare students for employment in six middle-skill occupations with a combined total of 104 annual job openings in the Victor Valley College area and 1,413 annual job openings in the Inland Empire/Desert Region.

Victor Valley College programs:

- Administration of Justice
- Criminal Justice
- Police Technician Specialist

Exhibit 55: Public safety middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Police and Sheriff's Patrol Officers | 449 | 40 | 628 | \$47.03 |
| Correctional Officers and Jailers | 471 | 44 | 463 | \$38.33 |
| First-Line Supervisors of Protective Service Workers, All Other | 56 | 7 | 154 | \$18.18 |
| Detectives and Criminal Investigators | 88 | 7 | 85 | \$49.12 |
| First-Line Supervisors of Correctional Officers | 53 | 4 | 45 | \$48.36 |
| First-Line Supervisors of Police and Detectives | 23 | 2 | 38 | \$72.60 |

Exhibit 56: Public safety higher-skill occupation

| Higher-skill Occupation | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Probation Officers and Correctional Treatment Specialists | 95 | 10 | 125 | \$38.66 |



TRANSPORTATION SECTOR

The Transportation CDE sector pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in three areas: operations; structural repair and refinishing; and systems diagnostics, services, and repair. Programs in this sector provide training related to six middle-skill occupations with a combined total of 135 annual job openings in the Victor Valley College area. In the college's area, there are an additional 247 annual job openings in this sector, for which there are currently no related program offerings.

Systems Diagnostics, Services, and Repair Pathway

This pathway prepares students for employment in transportation systems, including motor vehicles, rail systems, and small-engine equipment. The twelve programs offered in this pathway prepare students for employment in six middle-skill occupations with a combined total of 2,344 annual job openings in the Inland Empire/Desert Region.

Victor Valley College programs:

- Automotive Alternate Propulsion
- Automotive Brake and Suspension Specialist Technician
- Automotive Detailer and Porter
- Automotive Service Advisor and Manager
- Automotive Technology
- Automotive Transmission Specialist Technician
- Aviation Airframe Technician
- Aviation Maintenance Technology
- Aviation Powerplant Technician
- Composite Aerospace Manufacturing
- General Aircraft Maintenance Technician
- Light Duty Diesel Technician

Exhibit 57: Systems diagnostics, services, and repair middle-skill occupations

| Middle-skill Occupations | College Area 2019 Jobs | College Area Annual Job Openings | Regional Annual Job Openings | Regional Median Wage |
|---|------------------------|----------------------------------|------------------------------|----------------------|
| Automotive Service Technicians and Mechanics | 673 | 68 | 1,217 | \$19.51 |
| Bus and Truck Mechanics and Diesel Engine Specialists | 224 | 23 | 483 | \$24.05 |
| Mobile Heavy Equipment Mechanics, Except Engines | 93 | 11 | 240 | \$30.12 |
| Aircraft Mechanics and Service Technicians | 177 | 21 | 185 | \$34.63 |
| Automotive Body and Related Repairers | 95 | 10 | 167 | \$18.48 |
| Recreational Vehicle Service Technicians | 20 | 2 | 52 | \$19.45 |

Additional Transportation Training Opportunities

Future program development by Victor Valley College may focus on the following occupations related to the operations pathway. The following training opportunities have a combined total of 247 annual job openings in the Victor Valley College area and 5,334 annual job openings in the Inland Empire/Desert Region.

Exhibit 58: Transportation training opportunities

| Transportation Training Opportunities, Middle-skill | College Area 2019 Jobs | College Annual Openings | Regional Annual Openings | Median Hourly Earnings |
|---|------------------------|-------------------------|--------------------------|------------------------|
| Heavy and Tractor-Trailer Truck Drivers | 1,627 | 210 | 4,395 | \$21.57 |
| Production, Planning, and Expediting Clerks | 170 | 20 | 537 | \$22.06 |
| Transportation, Storage, and Distribution Managers | 111 | 11 | 279 | \$41.71 |
| Cargo and Freight Agents | 36 | 6 | 123 | \$23.15 |



ADDITIONAL CDE SECTORS AND CAREER OPPORTUNITIES

Fashion and Interior Design Sector

Pathways within this CDE sector are fashion design and merchandising, interior design, and personal services. Knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on projects, work-based instruction, and leadership development, such as the education and training programs offered through Family, Career and Community Leaders of America (FCCLA).

The occupations in this pathway typically provide wages that do not exceed the \$20.86 per hour high-wage standard. The interior designer occupation does exceed the high-wage standard, offering a median hourly wage of \$37.87. Despite the high-wage, this occupation is projected to have two annual job openings in the college area and 72 in the region and is therefore not recommended because it does not meet the in-demand standard. Please review program offerings from other community colleges and postsecondary education providers to ensure the region is not oversaturating the regional labor market with programs training for this occupation.



KEY FINDINGS AND RECOMMENDATIONS

Key findings

At 2.5%, population growth in the Victor Valley College area is expected to increase slightly faster than the state overall, 2.3%, but will be slower than the region, 4.3%. One of the fastest growing population age groups in the college area is residents age nine and younger. This group is expected to increase 4% by 2024, twice as fast as the overall population. Growth in this age group suggests a potential influx of students for the college within the next 20 years. This age group represents a significant portion of the college's future pipeline and presents an opportunity for targeted outreach and communication about the college's program offerings, especially within the local K-12 education system.

In the Victor Valley College area, 9% of residents hold an associate degree, and 13% hold a bachelor's degree or higher. The proportion of residents with a high school diploma or less, 51%, is a relatively substantial share of the population and higher than the region (44%) and the state overall (37%). This further indicates that the college should increase its outreach efforts and attract new students to the college to improve overall educational attainment in the area.

Victor Valley College offers career education programs in 14 out of the 15 CDE sectors. Fashion and interior design is the only sector not represented at the college. The occupations in this sector are expected to have 151 combined annual job openings in the college area and 3,006 annual job openings in the region. Despite the high number of regional annual job openings, none of this sector's middle-skill occupations offer a median hourly wage that meets or exceeds the \$20.86 per hour living wage standard.

Victor Valley College has opportunities to expand educational offerings in nine of its CDE sectors to meet the college area's need for more workers. In sum, there are 788 annual job openings for occupations related to the nine sectors. The sectors and their respective annual job openings in the college's area are:

- Transportation: 247 annual job openings
- Marketing, Sales, and Services: 168 annual job openings
- Health Science and Medical Technology: 134 annual job openings
- Education, Child Development, and Family Services: 104 annual job openings
- Business and Finance Sector: 56 annual job openings
- Energy, Environment, and Utilities: 53 annual job openings
- Hospitality, Tourism, and Recreation: 13 annual job openings
- Engineering and Architecture: 8 annual job openings
- Manufacturing and Product Development: 5 annual job openings



Recommendations

There are multiple employment opportunities in the area with training requirements not currently addressed by Victor Valley College career education programs. Furthermore, the college may expand training opportunities and program offerings to address several sectors with notable projected workforce demand in the next five years – including health sciences and medical technology; marketing, sales, and services; and transportation. Further exploration is recommended to determine if it is appropriate for the college to create new or expand existing programs. Further research would determine if training programs exist at nearby private, technical colleges or through other avenues. A conversation with regional employers who hire for these occupations could also reveal the potential for community college training program expansion to meet current and future industry needs.

Health care and social services sector businesses in the college area are expected to add 1,542 jobs over the next five years, accounting for about 27% of the area's job growth. Middle-skill occupations without program offerings at the college are expected to have 134 annual job openings, presenting an opportunity to expand health care program training. The college may choose to focus on occupations that meet or exceed the \$20.86 per hour living wage standard and that will be in demand. For example, licensed vocational nurses, offering a median hourly earnings of \$25.10, is an excellent occupational training program to explore. However, the cost of starting and operating health care programs is considerably high for community colleges. A cost-benefit analysis of programs and occupations not currently in existence at Victor Valley College would be one way for the college to determine the feasibility of creating new program offerings.

Training related to the transportation and warehousing sector is an area the college may want to develop further. Transportation and warehousing employers are highly concentrated in the college area and are expected to add 891 jobs over the next five years. Most of the job openings in this sector are for heavy and tractor-trailer truck drivers (210 annual job openings). However, if the college is not interested in starting a truck driving program, a logistics program may be warranted. Three additional transportation training opportunities are expected to have 37 annual job openings in the college area and 939 annual job openings in the region, each offering median hourly earnings that exceed the high-wage standard.

The college may want to explore the development of additional programs related to government employment, the largest employer in the area. This sector tends to hire a wide variety of occupations, but concentrates on education and public safety occupations. Please consult the Inland Empire/Desert Region Center of Excellence to disaggregate the occupational need in this sector further.

Finally, while the numbers of occupation and job openings in the Victor Valley College area are relatively low, job openings in the greater region are numerous; this translates to many more job opportunities for students who have the ability and desire to commute outside of the Victor Valley College area to seek work. The college could market regional job opportunities for students. Some points to consider for opportunities outside the immediate area are:

1. Victor Valley College may choose to investigate what programs other area community colleges are offering and whether they are providing a sufficient number of workers to fill job openings.
2. Victor Valley College may choose to identify employers whose businesses are close to its campus and determine those employers' near-term need for middle-skills workers.

APPENDIX A: VICTOR VALLEY COLLEGE AREA

Nine ZIP codes were used for this analysis. All data is derived from Emsi 2020.2.

Exhibit A1: Population and job counts for ZIP codes in the Victor Valley College area

| ZIP | City/Community | 2019 Population | 2019 Jobs | Middle-skill Job Count |
|-------|----------------|-----------------|---------------|------------------------|
| 92301 | Adelanto | 34,814 | 6,584 | 2,531 |
| 92307 | Apple Valley | 43,885 | 12,014 | 5,394 |
| 92308 | Apple Valley | 38,254 | 9,046 | 3,122 |
| 92344 | Hesperia | 22,746 | 2,376 | 1,077 |
| 92345 | Hesperia | 79,051 | 18,223 | 6,902 |
| 92371 | Phelan | 13,325 | 1,664 | 629 |
| 92392 | Victorville | 59,659 | 17,462 | 6,397 |
| 92394 | Victorville | 37,701 | 5,666 | 2,360 |
| 92395 | Victorville | 40,221 | 15,733 | 6,108 |
| | TOTAL | 369,656 | 88,767 | 34,520 |

Source: Emsi 20.2



APPENDIX B: DEMOGRAPHIC COMPOSITION REFERENCE

Exhibit B1: Gender by area

| Gender | College Area (Percentage) | Region (Percentage) |
|--------|---------------------------|---------------------|
| Male | 49.8% | 49.8% |
| Female | 50.2% | 50.2% |

Source: Emsi 20.2

Exhibit B2: Race and Ethnicity populations share by area

| Race, Ethnicity | College Area Population Share | Regional |
|---|-------------------------------|----------|
| Total Hispanic Ethnicity | 51.7% | 52.1% |
| White, Hispanic | 46.4% | 47.2% |
| White, Non-Hispanic | 32% | 30.9% |
| Black, Non-Hispanic | 10.6% | 7.1% |
| Asian, Non-Hispanic | 3% | 6.9% |
| Two or More Races, Non-Hispanic | 2.1% | 2.3% |
| American Indian or Alaskan Native, Hispanic | 1.8% | 1.6% |
| Black, Hispanic | 1.7% | 1.2% |
| Two or More Races, Hispanic | 1.4% | 1.3% |
| American Indian or Alaskan Native, Non-Hispanic | 0.4% | 0.4% |
| Asian, Hispanic | 0.2% | 0.6% |
| Native Hawaiian or Pacific Islander, Non-Hispanic | 0.2% | 0.3% |
| Native Hawaiian or Pacific Islander, Hispanic | 0.1% | 0.2% |

Source: Emsi 20.2

White: includes all individuals who identify with one or more nationalities or ethnic groups originating in Europe, the Middle East, or North Africa. Examples of these groups include, but are not limited to, German, Irish, English, Italian, Lebanese, Egyptian, Polish, French, Iranian, Slavic, Cajun, and Chaldean.

Black or African American: includes all individuals who identify with one or more nationalities or ethnic groups originating in any of the black racial groups of Africa. Examples of these groups include, but are not limited to, African American, Jamaican, Haitian, Nigerian, Ethiopian, and Somali.

American Indian or Alaska Native: includes all individuals who identify with any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment. It includes people who identify as "American Indian" or "Alaska Native" and includes groups such as Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, and Nome Eskimo Community.

Asian: includes all individuals who identify with one or more nationalities or ethnic groups originating in the Far East, Southeast Asia, or the Indian subcontinent. Examples of these groups include, but are not limited to, Chinese, Filipino, Asian Indian, Vietnamese, Korean, and Japanese. The category also includes groups such as Pakistani, Cambodian, Hmong, Thai, Bengali, Mien, etc.

Native Hawaiian and Pacific Islander: includes all individuals who identify with one or more nationalities or ethnic groups originating in Hawaii, Guam, Samoa, or other Pacific Islands. Examples of these groups include, but are not limited to, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, and Marshallese.

Hispanic, Latino, or Spanish origin: includes all individuals who identify with one or more nationalities or ethnic groups originating in Mexico, Puerto Rico, Cuba, Central and South America, and other Spanish cultures. Examples of these groups include, but are not limited to, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian, Guatemalan, Honduran, Spaniard, Ecuadorian, Peruvian, and Venezuelan.

Exhibit B3: Age by area

| Age Group | College Area 2019 Share | College Area Growth Rate | Regional Share | Regional Growth Rate |
|-----------|-------------------------|--------------------------|----------------|----------------------|
| 0-9 | 16% | 4% | 14% | 7% |
| 10-14 | 8% | -2% | 7% | -3% |
| 15-19 | 7% | 0% | 7% | 1% |
| 20-24 | 6% | -8% | 7% | -5% |
| 25-34 | 14% | 1% | 15% | 3% |
| 35-44 | 13% | 8% | 13% | 8% |
| 45-54 | 11% | -4% | 12% | -1% |
| 55-64 | 11% | -4% | 11% | 1% |
| 65+ | 12% | 18% | 13% | 18% |

Source: Emsi 20.2

Exhibit B4: Unemployment rate by community

| City/Community | Annual Average 2020 | December 2020 | January 2021 | February 2021 |
|-------------------|---------------------|---------------|--------------|---------------|
| Adelanto city | 16.0% | 17.7% | 16.8% | 15.9% |
| Apple Valley town | 9.5% | 9.8% | 9.4% | 9.0% |
| Hesperia city | 11.1% | 11.2% | 11.5% | 11.2% |
| Victorville city | 12.4% | 13.1% | 12.4% | 11.9% |

Source: California Labor Market Information Division

APPENDIX C: INDUSTRY AND LOCATION QUOTIENT DEFINITIONS, AND SECTORS WITH FEWER THAN 1,000 JOBS

Industry employment is a count of jobs in a given geography. Businesses operating within the same industry produce similar goods and services and share comparable production processes for creating these goods and services. The North American Industry Classification System (NAICS) is the federal system used to classify all business establishments into specific industries. Staffing patterns show the distribution of occupational employment and demand for each industry. For example, Victor Valley College employs faculty, but the institution also hires a variety of administrators and support staff to maintain operations. The same is true for most industries. Regional educational institutions should be aware of the types of industries in their area to help inform the needed industry-specific occupational skills that may be required by local employers.

Location Quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region “unique.” A high location quotient (1.2 times or greater concentration in the local region compared to the nation) reveals industries that are highly represented and make the area unique. Conversely, industries with a low location quotient account for a smaller share of jobs than the national average, indicating that while job seekers may find work in these industries, they are more likely to find a higher concentration of these jobs elsewhere in the nation.

Major industry sectors with fewer than 1,000 jobs, along with their 2019 job count and expected five-year job growth are:

- **Information**, 954 jobs in 2019, reduction of 45 jobs by 2024
- **Arts, Entertainment, and Recreation**, 847 jobs in 2019, addition of 41 jobs by 2024
- **Wholesale Trade**, 703 jobs in 2019, addition of 37 jobs by 2024
- **Utilities**, 618 jobs in 2019, reduction of 132 jobs by 2024
- **Agriculture, Forestry, Fishing and Hunting**, 345 jobs in 2019, addition 82 jobs by 2024
- **Mining, Quarrying, and Oil and Gas Extraction**, 242 jobs in 2019, addition of 69 jobs by 2024
- **Management of Companies and Enterprises**, 157 jobs in 2019, reduction of 15 jobs by 2024



APPENDIX D: KEY TERMS AND DEFINITIONS, AND REFERENCE TABLE WITH OCCUPATIONAL DEMAND AND WAGES

An **occupation** is a set of activities or tasks that employees are paid to perform. Employees that perform essentially the same tasks are in the same occupation, whether or not they work in the same industry. Some occupations are concentrated in a few particular industries; other occupations are found in many industries. For example, jobs for registered nurses are concentrated in the healthcare industry sector, but these jobs may also be employed by educational industries. The Standard Occupational Classification (SOC) System classifies 775 detailed occupations according to the tasks and duties of each job.

Skill Level Categories

- Lowest-skill: Occupations that require no formal education
- Lower-skill: Occupations that require a high school diploma or less.
- Middle-skill: Occupations that mostly require some college, a postsecondary certificate, or an associate degree. These are occupations relevant to community college training.
- Higher-skill: Occupations that mostly require a bachelor’s degree. These occupations are mostly trained by four-year colleges and universities.
- Highest-skill: Occupations that typically require education and training beyond a bachelor’s degree

Annual Job Openings are calculated by the sum in projected growth and replacement jobs (Growth + Replacements = Openings). Growth captures the change in the total number of workers employed in an occupation, while replacement jobs are estimates of workers permanently leaving an occupation and needing to be replaced by new hires. A combination of both numbers indicates total openings for the time frame.

Perkins V requirements are used to determine the occupations that are good investments for training resources. In addition to the training program needing to offer an industry recognized degree or certificate, an occupation also needs to meet one (1) of the following criteria to qualify for Perkins V:

1. High-wage, or
2. In-demand

Occupations that meet both criteria are ideal.

Exhibit D1: Occupational demand and wage data for occupations included in this report

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|--|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Accountants and Auditors | Higher-skill | 43 | 934 | \$25.84 | \$33.75 | \$42.91 | Both |
| Administrative Services Managers | Higher-skill | 13 | 259 | \$34.42 | \$47.33 | \$62.97 | Both |
| Agricultural and Food Science Technicians | Middle-skill | Insf. Data | 36 | \$16.49 | \$21.36 | \$26.44 | In-demand |
| Aircraft Mechanics and Service Technicians | Middle-skill | 21 | 185 | \$27.04 | \$34.63 | \$48.55 | Both |
| Appraisers and Assessors of Real Estate | Middle-skill | 4 | 64 | \$21.36 | \$28.30 | \$42.48 | Both |
| Architects, Except Landscape and Naval | Higher-skill | 5 | 102 | \$25.70 | \$35.82 | \$53.67 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|---|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Architectural and Civil Drafters | Middle-skill | 5 | 123 | \$20.13 | \$27.44 | \$36.01 | Both |
| Architectural and Engineering Managers | Higher-skill | 4 | 101 | \$55.58 | \$70.20 | \$83.70 | Both |
| Art Directors | Higher-skill | 2 | 100 | \$9.39 | \$24.62 | \$42.06 | Both |
| Audio and Video Equipment Technicians | Middle-skill | 3 | 87 | \$14.23 | \$18.65 | \$28.93 | Both |
| Automotive Body and Related Repairers | Middle-skill | 10 | 167 | \$13.27 | \$18.48 | \$28.57 | Both |
| Automotive Service Technicians and Mechanics | Middle-skill | 68 | 1217 | \$14.31 | \$19.51 | \$27.00 | In-demand |
| Bookkeeping, Accounting, and Auditing Clerks | Middle-skill | 94 | 2079 | \$15.76 | \$19.60 | \$25.17 | Both |
| Bus and Truck Mechanics and Diesel Engine Specialists | Middle-skill | 23 | 483 | \$18.32 | \$24.05 | \$30.33 | Both |
| Cargo and Freight Agents | Middle-skill | 6 | 123 | \$19.10 | \$23.15 | \$30.07 | Both |
| Carpenters | Middle-skill | 74 | 2591 | \$16.61 | \$22.93 | \$29.57 | Both |
| Chefs and Head Cooks | Middle-skill | 12 | 252 | \$14.00 | \$20.24 | \$32.18 | Both |
| Chief Executives | Higher-skill | 9 | 204 | \$40.59 | \$78.12 | \$118.61 | Both |
| Child, Family, and School Social Workers | Higher-skill | 15 | 234 | \$20.13 | \$25.85 | \$33.33 | Both |
| Childcare Workers | Middle-skill | 126 | 2008 | \$9.71 | \$12.04 | \$15.76 | In-demand |
| Civil Engineering Technicians | Middle-skill | 3 | 67 | \$26.41 | \$29.74 | \$35.59 | Both |
| Civil Engineers | Higher-skill | 11 | 285 | \$40.81 | \$52.01 | \$63.56 | Both |
| Clinical Laboratory Technologists and Technicians | Middle-skill | 9 | 194 | \$19.21 | \$24.72 | \$35.08 | Both |
| Community and Social Service Specialists, All Other | Higher-skill | 9 | 165 | \$13.81 | \$23.93 | \$31.70 | Both |
| Compensation, Benefits, and Job Analysis Specialists | Middle-skill | 2 | 50 | \$26.35 | \$32.85 | \$42.81 | Both |
| Compliance Officers | Higher-skill | 19 | 274 | \$26.86 | \$35.37 | \$43.59 | Both |
| Computer and Information Systems Managers | Higher-skill | 7 | 152 | \$52.52 | \$68.15 | \$82.80 | Both |
| Computer Network Architects | Middle-skill | 2 | 39 | \$28.91 | \$49.65 | \$62.90 | Both |
| Computer Network Support Specialists | Middle-skill | 5 | 108 | \$22.76 | \$28.00 | \$37.23 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|---|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic | Middle-skill | 1 | 29 | \$21.06 | \$29.07 | \$37.82 | Both |
| Computer Programmers | Higher-skill | 3 | 72 | \$29.41 | \$40.36 | \$48.42 | Both |
| Computer Systems Analysts | Higher-skill | 8 | 186 | \$31.78 | \$39.87 | \$50.65 | Both |
| Computer User Support Specialists | Middle-skill | 17 | 390 | \$19.54 | \$26.11 | \$34.08 | Both |
| Computer-Controlled Machine Tool Operators, Metal and Plastic | Middle-skill | 3 | 102 | \$14.48 | \$17.92 | \$22.20 | In-demand |
| Construction and Building Inspectors | Middle-skill | 9 | 164 | \$31.27 | \$40.80 | \$53.80 | Both |
| Construction Managers | Middle-skill | 16 | 482 | \$23.37 | \$32.46 | \$51.52 | Both |
| Correctional Officers and Jailers | Middle-skill | 44 | 463 | \$29.37 | \$38.33 | \$43.30 | Both |
| Data Entry Keyers | Middle-skill | 8 | 199 | \$13.15 | \$15.26 | \$17.75 | In-demand |
| Database Administrators | Higher-skill | 2 | 49 | \$33.88 | \$46.72 | \$61.31 | Both |
| Dental Hygienists | Middle-skill | 14 | 186 | \$40.54 | \$45.41 | \$50.58 | Both |
| Detectives and Criminal Investigators | Middle-skill | 7 | 85 | \$45.11 | \$49.12 | \$58.20 | Both |
| Education Administrators, Preschool and Childcare Center/ Program | Higher-skill | 3 | 55 | \$14.88 | \$18.27 | \$30.89 | Both |
| Electrical and Electronics Engineering Technicians | Middle-skill | 5 | 107 | \$22.49 | \$29.45 | \$38.39 | Both |
| Electrical and Electronics Repairers, Commercial and Industrial Equipment | Middle-skill | 4 | 70 | \$25.74 | \$31.82 | \$38.57 | Both |
| Electrical Engineers | Higher-skill | 4 | 79 | \$32.57 | \$42.26 | \$53.47 | Both |
| Electrical Power-Line Installers and Repairers | Middle-skill | 8 | 148 | \$25.84 | \$35.93 | \$54.40 | Both |
| Electricians | Middle-skill | 42 | 1365 | \$18.07 | \$24.28 | \$32.53 | Both |
| Electronics Engineers, Except Computer | Higher-skill | 3 | 58 | \$42.88 | \$53.83 | \$60.51 | Both |
| Elementary School Teachers, Except Special Education | Higher-skill | 162 | 1962 | \$33.13 | \$42.88 | \$48.90 | Both |
| Emergency Medical Technicians and Paramedics | Middle-skill | 23 | 280 | \$12.10 | \$15.49 | \$20.02 | In-demand |
| Engineering Technicians, Except Drafters, All Other | Middle-skill | 4 | 86 | \$26.71 | \$34.76 | \$42.10 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|---|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Executive Secretaries and Executive Administrative Assistants | Middle-skill | 20 | 397 | \$23.06 | \$28.13 | \$34.25 | Both |
| Farmers, Ranchers, and Other Agricultural Managers | Middle-skill | 2 | 230 | \$16.19 | \$21.41 | \$51.02 | Both |
| Film and Video Editors | Higher-skill | 1 | 25 | \$20.18 | \$40.40 | \$54.56 | Both |
| Financial Managers | Higher-skill | 19 | 421 | \$36.52 | \$53.14 | \$72.74 | Both |
| Firefighters | Middle-skill | 17 | 269 | \$25.92 | \$30.40 | \$37.87 | Both |
| First-Line Supervisors of Construction Trades and Extraction Workers | Middle-skill | 35 | 1000 | \$24.06 | \$32.24 | \$42.99 | Both |
| First-Line Supervisors of Correctional Officers | Middle-skill | 4 | 45 | \$46.59 | \$48.36 | \$51.21 | Both |
| First-Line Supervisors of Farming, Fishing, and Forestry Workers | Middle-skill | 1 | 79 | \$16.06 | \$22.73 | \$30.11 | In-demand |
| First-Line Supervisors of Fire Fighting and Prevention Workers | Middle-skill | 2 | 24 | \$37.62 | \$45.26 | \$70.76 | Both |
| First-Line Supervisors of Food Preparation and Serving Workers | Middle-skill | 125 | 1908 | \$13.03 | \$14.94 | \$18.63 | In-demand |
| First-Line Supervisors of Gaming Workers | Middle-skill | 9 | 146 | \$20.78 | \$27.77 | \$33.45 | Both |
| First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | Middle-skill | 5 | 267 | \$15.42 | \$22.64 | \$32.54 | Both |
| First-Line Supervisors of Mechanics, Installers, and Repairers | Middle-skill | 27 | 500 | \$26.09 | \$33.91 | \$42.44 | Both |
| First-Line Supervisors of Non-Retail Sales Workers | Middle-skill | 16 | 402 | \$15.25 | \$24.90 | \$37.23 | Both |
| First-Line Supervisors of Office and Administrative Support Workers | Middle-skill | 88 | 1750 | \$20.78 | \$26.41 | \$33.50 | Both |
| First-Line Supervisors of Police and Detectives | Middle-skill | 2 | 38 | \$57.42 | \$72.60 | \$84.12 | Both |
| First-Line Supervisors of Protective Service Workers, All Other | Middle-skill | 7 | 154 | \$13.49 | \$18.18 | \$28.43 | Both |
| Floral Designers | Middle-skill | 2 | 52 | \$13.63 | \$16.78 | \$19.09 | In-demand |
| Food Service Managers | Middle-skill | 37 | 653 | \$15.83 | \$20.87 | \$29.15 | Both |
| General and Operations Managers | Higher-skill | 94 | 2162 | \$31.34 | \$48.54 | \$69.84 | Both |
| Graphic Designers | Middle-skill | 7 | 255 | \$16.44 | \$20.71 | \$29.83 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|---|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Healthcare Support Workers, All Other | Middle-skill | 14 | 208 | \$18.22 | \$21.26 | \$24.08 | In-demand |
| Heating, Air Conditioning, and Refrigeration Mechanics and Installers | Middle-skill | 21 | 572 | \$16.33 | \$19.96 | \$26.93 | Both |
| Heavy and Tractor-Trailer Truck Drivers | Middle-skill | 210 | 4395 | \$16.43 | \$21.57 | \$28.71 | Both |
| Human Resources Managers | Higher-skill | 6 | 152 | \$41.68 | \$54.47 | \$69.44 | Both |
| Human Resources Specialists | Higher-skill | 25 | 607 | \$24.36 | \$29.60 | \$37.34 | Both |
| Industrial Engineering Technicians | Middle-skill | 2 | 48 | \$22.43 | \$29.48 | \$36.74 | Both |
| Industrial Engineers | Higher-skill | 4 | 119 | \$29.74 | \$38.44 | \$48.97 | Both |
| Industrial Production Managers | Middle-skill | 5 | 132 | \$36.09 | \$47.52 | \$62.53 | Both |
| Instructional Coordinators | Higher-skill | 13 | 201 | \$37.16 | \$49.62 | \$57.60 | Both |
| Kindergarten Teachers, Except Special Education | Higher-skill | 12 | 144 | \$24.89 | \$34.17 | \$38.76 | Both |
| Labor Relations Specialists | Higher-skill | 3 | 57 | \$24.57 | \$31.26 | \$43.59 | Both |
| Legal Secretaries | Middle-skill | 6 | 152 | \$18.20 | \$25.39 | \$30.85 | Both |
| Legal Support Workers, All Other | Middle-skill | 4 | 51 | \$20.73 | \$25.83 | \$29.28 | Both |
| Licensed Vocational Nurses | Middle-skill | 51 | 809 | \$20.90 | \$25.10 | \$29.89 | Both |
| Machinists | Middle-skill | 15 | 411 | \$15.35 | \$19.27 | \$25.28 | Both |
| Maintenance and Repair Workers, General | Middle-skill | 87 | 1684 | \$14.89 | \$19.84 | \$26.30 | In-demand |
| Management Analysts | Higher-skill | 29 | 679 | \$26.81 | \$37.83 | \$53.36 | Both |
| Managers, All Other | Higher-skill | 40 | 920 | \$17.06 | \$34.61 | \$57.22 | Both |
| Market Research Analysts and Marketing Specialists | Higher-skill | 20 | 591 | \$18.54 | \$26.18 | \$36.30 | Both |
| Marketing Managers | Higher-skill | 4 | 130 | \$35.55 | \$48.04 | \$70.92 | Both |
| Mechanical Drafters | Middle-skill | 2 | 53 | \$19.70 | \$24.37 | \$30.60 | Both |
| Mechanical Engineers | Higher-skill | 4 | 123 | \$32.57 | \$40.53 | \$50.53 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|---|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Medical and Health Services Managers | Higher-skill | 21 | 401 | \$43.12 | \$56.33 | \$70.83 | Both |
| Medical Assistants | Middle-skill | 64 | 1287 | \$13.13 | \$15.23 | \$17.83 | In-demand |
| Medical Records and Health Information Technicians | Middle-skill | 9 | 184 | \$17.09 | \$22.44 | \$36.36 | Both |
| Medical Secretaries | Middle-skill | 60 | 1095 | \$14.09 | \$17.40 | \$21.49 | In-demand |
| Medical Transcriptionists | Middle-skill | 4 | 73 | \$11.41 | \$17.46 | \$26.39 | In-demand |
| Meeting, Convention, and Event Planners | Higher-skill | 4 | 125 | \$17.25 | \$22.96 | \$33.04 | Both |
| Middle School Teachers, Except Special and Career/Technical Education | Higher-skill | 30 | 352 | \$31.64 | \$39.99 | \$45.96 | Both |
| Mobile Heavy Equipment Mechanics, Except Engines | Middle-skill | 11 | 240 | \$24.21 | \$30.12 | \$35.78 | Both |
| Multimedia Artists and Animators | Middle-skill | Insf. Data | 36 | \$6.69 | \$15.36 | \$31.22 | Both |
| Network and Computer Systems Administrators | Middle-skill | 7 | 158 | \$30.39 | \$38.48 | \$50.43 | Both |
| Nursing Assistants | Middle-skill | 83 | 1311 | \$13.07 | \$15.62 | \$18.45 | In-demand |
| Paralegals and Legal Assistants | Middle-skill | 11 | 262 | \$22.27 | \$27.46 | \$35.00 | Both |
| Payroll and Timekeeping Clerks | Middle-skill | 12 | 238 | \$18.83 | \$22.56 | \$26.50 | Both |
| Personal Financial Advisors | Higher-skill | 6 | 122 | \$25.86 | \$36.52 | \$87.10 | Both |
| Photographers | Middle-skill | 4 | 146 | \$12.18 | \$20.05 | \$36.36 | Both |
| Physical Therapist Assistants | Middle-skill | 6 | 103 | \$30.72 | \$34.61 | \$38.13 | Both |
| Plumbers, Pipefitters, and Steamfitters | Middle-skill | 35 | 983 | \$16.81 | \$24.48 | \$30.10 | Both |
| Police and Sheriff's Patrol Officers | Middle-skill | 40 | 628 | \$36.88 | \$47.03 | \$57.47 | Both |
| Preschool Teachers, Except Special Education | Middle-skill | 27 | 413 | \$12.55 | \$14.36 | \$17.65 | In-demand |
| Probation Officers and Correctional Treatment Specialists | Higher-skill | 10 | 125 | \$32.78 | \$38.66 | \$50.79 | Both |
| Producers and Directors | Higher-skill | 2 | 58 | \$16.10 | \$30.34 | \$44.51 | Both |
| Production, Planning, and Expediting Clerks | Middle-skill | 20 | 537 | \$17.76 | \$22.06 | \$27.74 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|--|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Property, Real Estate, and Community Association Managers | Middle-skill | 15 | 289 | \$19.83 | \$30.43 | \$51.81 | Both |
| Psychiatric Technicians | Middle-skill | 7 | 149 | \$31.98 | \$34.62 | \$37.58 | Both |
| Public Relations Specialists | Higher-skill | 7 | 177 | \$21.09 | \$29.25 | \$40.28 | Both |
| Radiologic Technologists | Middle-skill | 6 | 140 | \$30.62 | \$36.03 | \$41.78 | Both |
| Real Estate Brokers | Middle-skill | 8 | 168 | \$18.25 | \$37.66 | \$56.98 | Both |
| Real Estate Sales Agents | Middle-skill | 23 | 476 | \$15.97 | \$26.42 | \$44.61 | Both |
| Recreational Vehicle Service Technicians | Middle-skill | 2 | 52 | \$15.76 | \$19.45 | \$24.90 | In-demand |
| Registered Nurses | Middle-skill | 141 | 2616 | \$38.82 | \$47.45 | \$58.41 | Both |
| Reinforcing Iron and Rebar Workers | Middle-skill | 1 | 47 | \$14.14 | \$16.42 | \$26.11 | In-demand |
| Respiratory Therapists | Middle-skill | 8 | 150 | \$29.33 | \$35.39 | \$41.59 | Both |
| Sales Managers | Higher-skill | 19 | 559 | \$27.32 | \$43.00 | \$71.18 | Both |
| Sales Representatives, Services, All Other | Middle-skill | 61 | 1437 | \$14.82 | \$22.92 | \$33.68 | Both |
| Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | Middle-skill | 38 | 1777 | \$18.91 | \$27.77 | \$39.03 | Both |
| Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | Higher-skill | 3 | 169 | \$24.30 | \$34.64 | \$52.10 | Both |
| Secondary School Teachers, Except Special and Career/ Technical Education | Higher-skill | 85 | 1034 | \$31.61 | \$40.49 | \$47.02 | Both |
| Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | Middle-skill | 136 | 2760 | \$14.16 | \$18.58 | \$23.76 | In-demand |
| Sheet Metal Workers | Middle-skill | 9 | 261 | \$17.17 | \$24.15 | \$30.67 | Both |
| Social and Community Service Managers | Higher-skill | 9 | 249 | \$18.91 | \$30.62 | \$49.47 | Both |
| Social Workers, All Other | Higher-skill | 17 | 263 | \$27.08 | \$33.84 | \$41.17 | Both |
| Software Developers, Applications | Higher-skill | 8 | 237 | \$38.82 | \$48.70 | \$60.83 | Both |
| Software Developers, Systems Software | Higher-skill | 4 | 118 | \$37.41 | \$48.83 | \$62.03 | Both |
| Soil and Plant Scientists | Higher-skill | Insf. Data | 18 | \$24.54 | \$29.81 | \$51.68 | Both |

Continued

| Occupations | Skill Level | College Area Annual Openings | Regional Annual Openings | Pct. 25 Hourly Earnings | Median Hourly Earnings | Pct. 75 Hourly Earnings | Perkins V |
|---|--------------|------------------------------|--------------------------|-------------------------|------------------------|-------------------------|-----------|
| Solar Photovoltaic Installers | Middle-skill | 1 | 52 | \$16.80 | \$19.15 | \$25.83 | Both |
| Sound Engineering Technicians | Middle-skill | 0 | 17 | \$11.22 | \$15.10 | \$26.72 | Both |
| Special Education Teachers, Kindergarten and Elementary School | Higher-skill | 16 | 203 | \$29.24 | \$37.82 | \$47.13 | Both |
| Special Education Teachers, Middle School | Higher-skill | 4 | 46 | \$33.38 | \$38.72 | \$45.60 | Both |
| Special Education Teachers, Preschool | Middle-skill | 3 | 51 | \$11.00 | \$12.07 | \$18.09 | Neither |
| Special Education Teachers, Secondary School | Higher-skill | 9 | 114 | \$37.33 | \$43.18 | \$47.84 | Both |
| Structural Iron and Steel Workers | Middle-skill | 5 | 237 | \$21.97 | \$32.33 | \$39.40 | Both |
| Structural Metal Fabricators and Fitters | Middle-skill | 3 | 93 | \$13.62 | \$16.85 | \$21.51 | In-demand |
| Substance Abuse, Behavioral Disorder, and Mental Health Counselors | Higher-skill | 32 | 532 | \$17.20 | \$21.24 | \$26.94 | Both |
| Substitute Teachers | Higher-skill | 137 | 1788 | \$16.37 | \$18.05 | \$21.09 | In-demand |
| Surgical Technologists | Middle-skill | 6 | 135 | \$22.87 | \$27.39 | \$32.60 | Both |
| Teacher Assistants | Middle-skill | 192 | 2469 | \$13.79 | \$16.84 | \$19.75 | In-demand |
| Teachers and Instructors, All Other | Higher-skill | 36 | 615 | \$12.71 | \$16.79 | \$26.42 | In-demand |
| Telecommunications Equipment Installers and Repairers, Except Line Installers | Middle-skill | 27 | 403 | \$22.21 | \$26.71 | \$30.13 | Both |
| Telecommunications Line Installers and Repairers | Middle-skill | 8 | 179 | \$17.20 | \$25.59 | \$35.66 | Both |
| Training and Development Specialists | Middle-skill | 13 | 290 | \$19.05 | \$27.60 | \$37.68 | Both |
| Transportation, Storage, and Distribution Managers | Middle-skill | 11 | 279 | \$32.81 | \$41.71 | \$54.09 | Both |
| Veterinary Technologists and Technicians | Middle-skill | 9 | 90 | \$13.25 | \$14.72 | \$25.66 | In-demand |
| Water and Wastewater Treatment Plant and System Operators | Middle-skill | 10 | 146 | \$26.25 | \$32.87 | \$40.77 | Both |
| Web Developers | Middle-skill | 4 | 109 | \$16.52 | \$24.36 | \$36.27 | Both |
| Welders, Cutters, Solderers, and Brazers | Middle-skill | 16 | 439 | \$15.24 | \$18.41 | \$23.15 | In-demand |






Source: COE, Emsi 20.2

APPENDIX E: CDE-TO-CCCCO-PRIORITY-SECTOR CROSSWALK

Exhibit E1: Crosswalk linking CDE to CCCC priority sectors

| | CDE Industry Sectors and Pathways | CCCCO Priority and Emerging Sectors |
|---|---|--|
|  | Agriculture and Natural Resources (ANR) <ul style="list-style-type: none"> • Agricultural Business • Agricultural Mechanics • Agriscience • Animal Science • Forestry and Natural Resources • Ornamental Horticulture • Plant and Soil Science | Agriculture, Water & Environmental Technology |
|  | Arts, Media, and Entertainment (AME) <ul style="list-style-type: none"> • Design, Visual, and Media Arts • Performing Arts • Production and Managerial Arts • Game Design and Integration | Information and Communication Technologies/Digital Media |
|  | Building and Construction Trades (BCT) <ul style="list-style-type: none"> • Cabinetry, Millwork, and Woodworking • Engineering and Heavy Construction • Mechanical Systems Installation and Repair • Residential and Commercial Construction | Energy, Construction & Utilities |
|  | Business and Finance (BF) <ul style="list-style-type: none"> • Business Management • Financial Services • International Business | Business & Entrepreneurship |
|  | Education, Child Development, and Family Services (ECDFS) <ul style="list-style-type: none"> • Child Development • Consumer Services • Education • Family and Human Services | Education |
|  | Energy, Environment, and Utilities (EEU) <ul style="list-style-type: none"> • Environmental Resources • Energy and Power Technology • Telecommunications | Energy, Construction & Utilities |
|  | Engineering and Architecture (EA) <ul style="list-style-type: none"> • Architectural Design • Engineering Technology • Engineering Design • Environmental Engineering | Agriculture, Water & Environmental Technology |
|  | Fashion and Interior Design (FID) <ul style="list-style-type: none"> • Fashion Design and Merchandising • Interior Design • Personal Services | Retail/Hospitality/ Tourism |
|  | Health Science and Medical Technology (HSMT) <ul style="list-style-type: none"> • Biotechnology • Patient Care • Health Care Administrative Services • Health Care Operational Support Services • Public and Community Health • Mental and Behavioral Health | Health Life Sciences & Biotechnology |
|  | Hospitality, Tourism, and Recreation (HTR) <ul style="list-style-type: none"> • Food Science, Dietetics, and Nutrition • Food Services and Hospitality • Hospitality, Tourism, and Recreation | Retail/Hospitality/ Tourism |

Continued

| | CDE Industry Sectors and Pathways | CCCCO Priority and Emerging Sectors |
|---|--|---|
|  | Information and Communication Technologies (ICT) <ul style="list-style-type: none"> • Information Support and Services • Networking • Software and Systems Development • Games and Simulation | Information and Communication Technologies/ Digital Media |
|  | Manufacturing and Product Development (MPD) <ul style="list-style-type: none"> • Graphic Production Technologies • Machining and Forming Technologies • Welding and Materials Joining • Product Innovation and Design | Advanced Manufacturing |
|  | Marketing, Sales, and Service (MSS) <ul style="list-style-type: none"> • Marketing • Professional Sales • Entrepreneurship/ Self-Employment | Business & Entrepreneurship |
|  | Public Services (PS) <ul style="list-style-type: none"> • Public Safety • Emergency Response • Legal Practices | Public Services |
|  | Transportation (T) <ul style="list-style-type: none"> • Operations • Structural Repair and Refinishing • Systems Diagnostics and Service | Advanced Transportation & Logistics |



APPENDIX F: REFERENCES CITED AND RESOURCES

- Victor Valley College. (2020). 2019-2020 Catalog. Retrieved from <https://www.vvc.edu/pdf/VVC-Catalog-2019-20.pdf>
- California Department of Education. (2020). CTE Model Curriculum Standards. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/ctemcstandards.asp>
- Centers of Excellence for Labor Market Research. (2017, August). TOP to SOC Crosswalk. Retrieved from <http://coecc.net/>
- Economic Modeling Specialists International. Datarun 2020.2. (2020). Retrieved from <https://www.economicmodeling.com/>
- Edmonds, K., Mitchel, J. (2017, January). Arts, Media, and Entertainment. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/artsmedia.pdf>
- Heuvel, B., Ford, A. (2017, January). Education, Child Development, and Family Services. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/edchildfamily.pdf>
- Heuvel, B., Mooney, H. (2017, January). Agriculture and Natural Resources. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/agnatural.pdf>
- Heuvel, B., Webb, M. (2017, January). Fashion and Interior Design. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/fashioninterior.pdf>
- Heuvel, B., Wright, T. (2017, January). Hospitality, Tourism, and Recreation. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/hosptourrec.pdf>
- McCabe, L., Beck, C. (2017, January). Health Science and Medical Technology. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/healthmedical.pdf>
- McCabe, L., Beck, C. (2017, January). Public Services. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/pubservices.pdf>
- McCabe, L., Dubois, D. (2017, January). Transportation. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/transportation.pdf>
- McCabe, L., Dunn, J. (2017, January). Building and Construction Trades. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/buildingconstruct.pdf>
- McCabe, L., Dunn, J. (2017, January). Engineering and Architecture. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/enginearchit.pdf>
- McCabe, L., Ferrier, K. (2017, January). Marketing, Sales, and Services. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/mktsalesservices.pdf>
- McCabe, L., Ferrier, K., Yates, M. (2017, January). Business and Finance. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/bizfinance.pdf>
- McCabe, L., Oliverira, M. (2017, January). Manufacturing and Product Development. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/manproddev.pdf>
- McCabe, L., Page, G. (2017, January). Information and Communication Technologies. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/infocomtech.pdf>
- McCabe, L., Yates, M. (2017, January). Energy, Environment, and Utilities. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/energyutilities.pdf>
- National Center for O*NET Development. (2020). O*NET OnLine. Retrieved from <https://www.onetonline.org/>

State of California, Department of Finance. (May 2020). E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change – January 1, 2019 and 2020. Retrieved from <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/>

United States Census Bureau. (2017, January 4). FAQ. Retrieved June 02, 2021, from <https://www.census.gov/topics/population/race/about/faq.html>

United States Census Bureau. (2020). 2020 Census Questions: Hispanic origin. Retrieved June 02, 2021, from <https://2020census.gov/en/about-questions/hispanic-origin.html>

United States Census Bureau. (2020). 2020 Census Questions: Race. Retrieved June 02, 2021, from <https://2020census.gov/en/about-questions/2020-census-questions-race.html>

United States Census Bureau. (2020). Population estimates. Retrieved from <https://data.census.gov/>



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.coecc.net.

For more information on this study, contact:

Michael Goss, Director
Center of Excellence for Labor Market Research
Inland Empire/Desert Region
Hosted at Chaffey College
(909) 652-7754
Michael.Goss@chaffey.edu

Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

© 2021 California Community Colleges Chancellor's Office Economic and Workforce Development Program

*Please consider the environment before printing.
This document is designed for double-sided printing.*

Inland Empire/Desert COE Team:
Michael Goss
Lori Sanchez,
& Paul Vaccher

Thank you to the Victor Valley College Research Team for their participation and invaluable input. Special thanks to Ashley Etchison and the Inland Empire/Desert Regional Consortium marketing and outreach team for access to the consortium's photo catalog.



vvc.edu



coecc.net



California
Community
Colleges

cccco.edu