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COLLEGE OF THE DESERT LOCAL WORKFORCE DEMAND ASSESSMENT



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

Strong Workforce Data Analytics
and Alignment Project



COLLEGE
of the **DESERT**



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CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

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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.

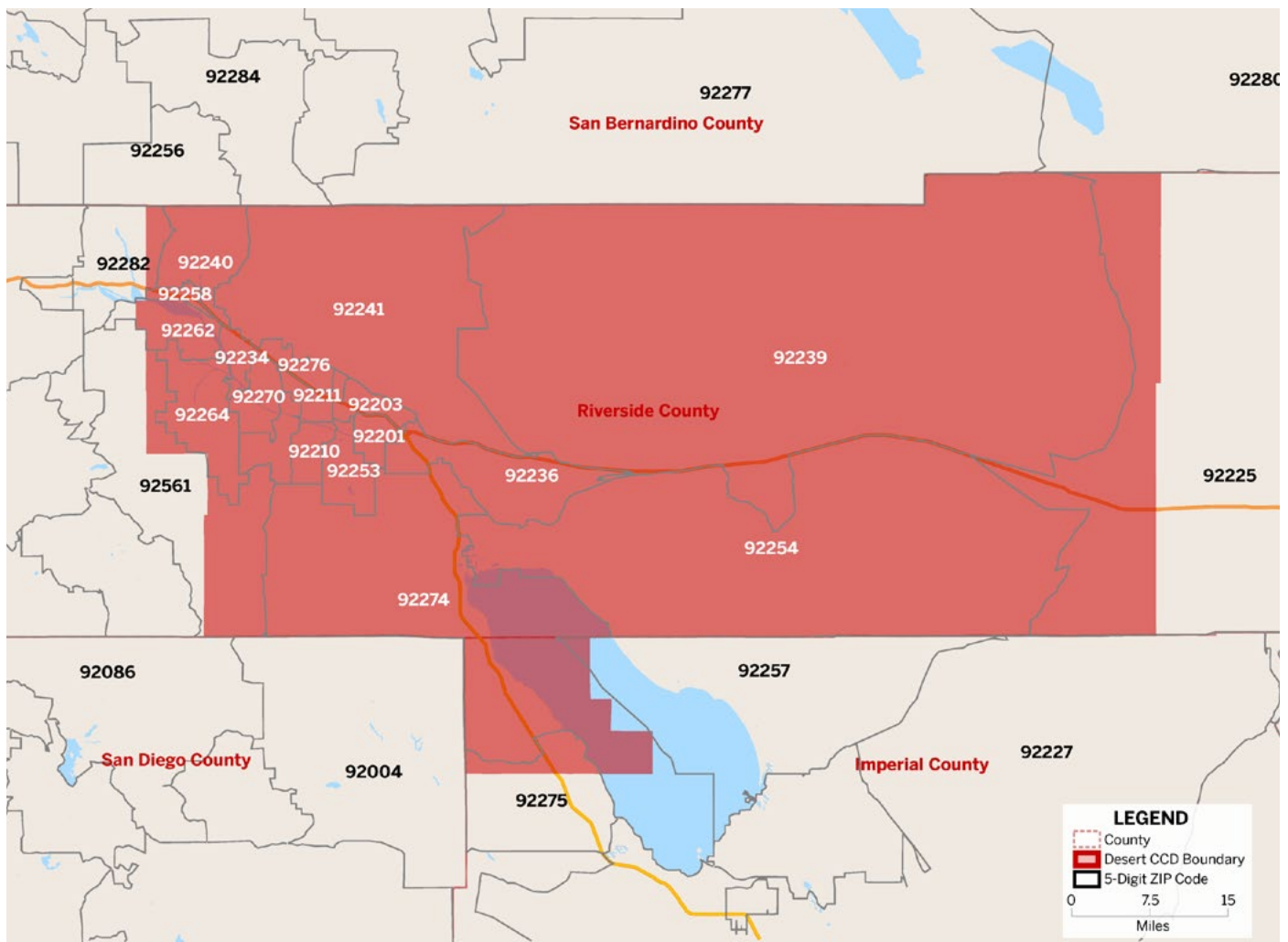
INTRODUCTION

Located in the Low Desert Subregion of the Inland Empire Desert Region, College of the Desert serves the cities and communities of Cathedral City, Coachella, Desert Center, Desert Hot Springs, Indian Wells, Indio, La Quinta, Mecca, Palm Desert, Palm Springs, Rancho Mirage, Thermal, Thousand Palms, and Whitewater (Exhibit 1). The College of the Desert's main campus is located in Palm Desert. Off-campus sites are located in Coachella, Desert Hot Springs, Indio, Mecca/Thermal, Palm Springs, and several credit and non-credit high school campus locations.

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 College of the Desert's research staff, seeks to illuminate the job opportunities available to students within the area served by College of the Desert 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 and high-wage occupations for which no programs currently exist.

Exhibit 1: Area served by College of the Desert



Source: College of the Desert

METHODOLOGY

The analysis in this local workforce demand assessment reviews College of the Desert'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. College of the Desert'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 (CCCCO), was used to link CDE sectors to College of the Desert's TOP code offerings. Linking College of the Desert's TOP offerings to CDE sectors provides a foundation for aligning local secondary career education (CE) course offerings to community college programs in future studies.

The TOP-code-to-Standard-Occupational-Classification (SOC) crosswalk, 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 on employment opportunities for community college students who transfer to four-year postsecondary institutions.

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 Needs 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 (IEDR). 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 a crosswalk linking CDE sectors with CCCCCO sectors.



DEMOGRAPHIC COMPOSITION

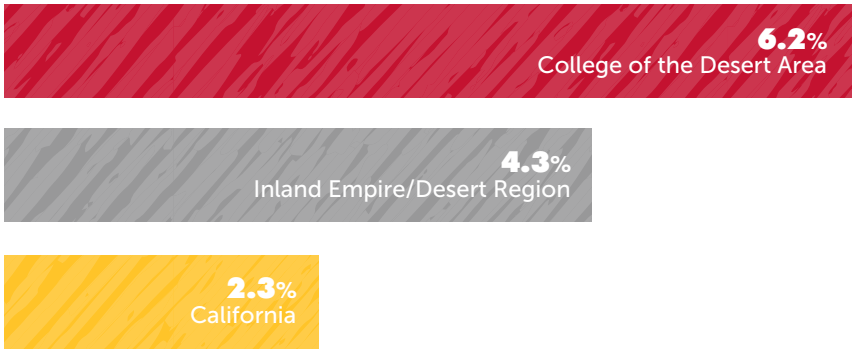
This section analyzes the demographic characteristics of the College of the Desert area, including population count, gender, race/ethnicity, age, and educational attainment. Understanding the local area’s composition is essential to ensure the college is serving its population and undertaking appropriate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

Resident Population

The area served by the College of the Desert contains 454,495 residents or approximately 9.7% of the Inland Empire/Desert Region’s population of nearly 4.7 million residents. The largest city in the area served by the college is Indio, which is the 88th largest city in California with an estimated 90,087 residents in 2019. According to the California Department of Finance, Palm Desert, the location of the college’s main campus, is the 171st largest city in the state with 52,911 residents in 2019.

Over the five-year period between 2019 and 2024, the area’s population is projected to increase by 6.2%, adding 28,239 additional residents (Exhibit 2). At 6.2%, local growth is faster than that of the region overall, which is projected to increase by 4.3% during the five-year timeframe.

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

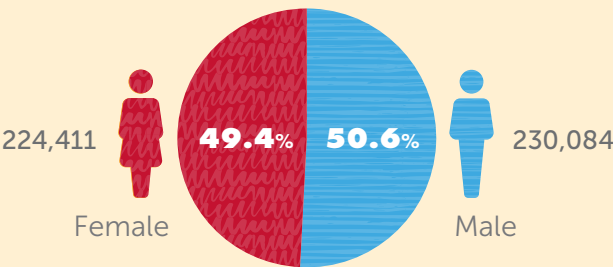


Source: Emsi 20.2

Resident Gender

The College of the Desert area has slightly more men, 50.6%, than women, 49.4% (Exhibit 3). Appendix B displays gender shares for the college area and the region.

Exhibit 3: 2019 gender population share, College of the Desert area



Source: Emsi 20.2

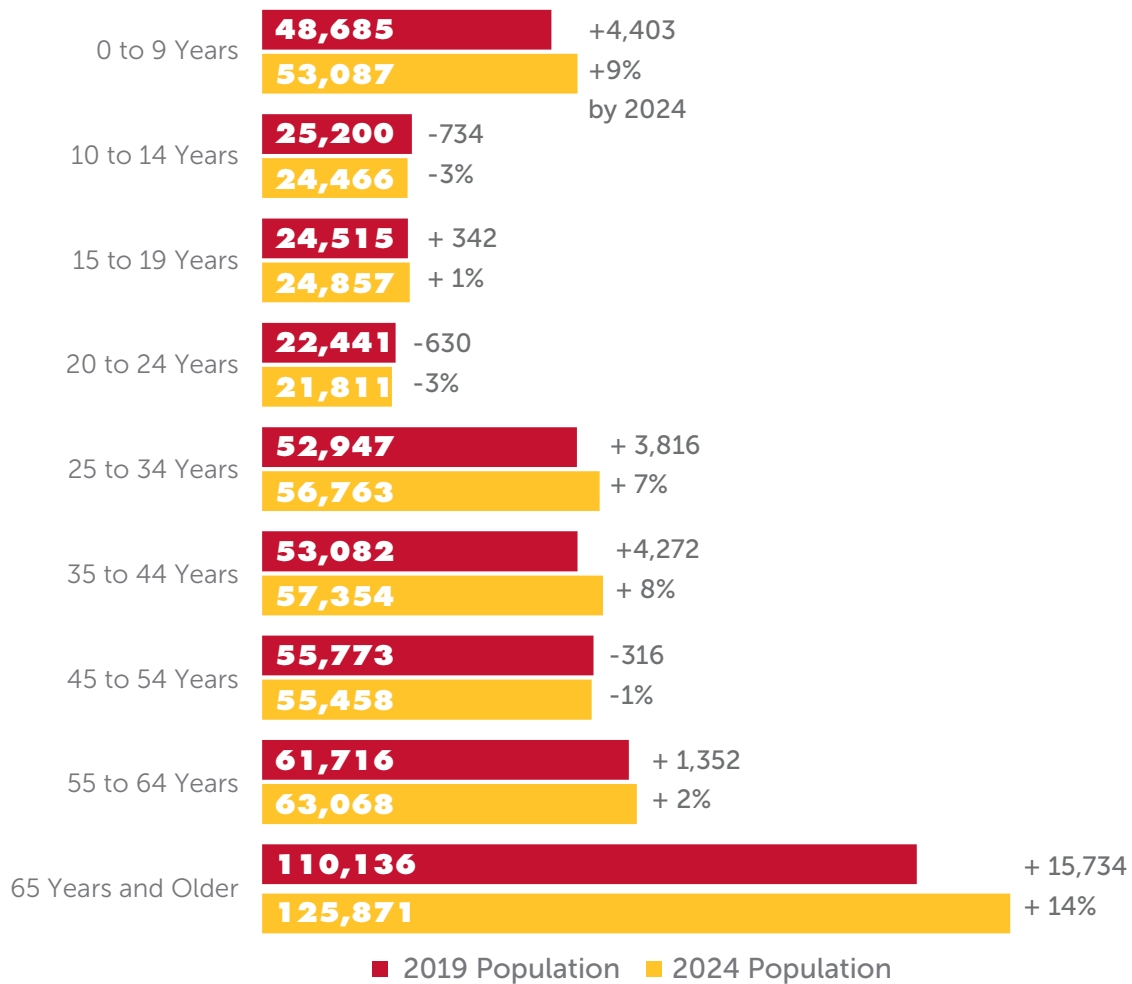
Age

Information on the age of residents can indicate future enrollment needs in the College of the Desert area. In 2019, residents age 9 and younger represented about 10.7% of the population in the area served by College of the Desert. This group is expected to grow by 9% by 2024, faster than the overall population at 6% (Exhibit 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 fall by 3% over the next five years. The 15-to-19-year-old age group, representing high school students and recent graduates, represents just over 5% of the population. This age group is expected to grow by 1% through 2024.

The working-age population, those residents ages 25-64, comprised 49.2% of the area's population in 2019. Over the next five years, the working-age population is expected to gain 9,124 residents, growing by 4.1%. Within the working-age population, notable growth over the next five years is expected in two age groups: residents ages 25-34 will increase by 7%, and residents ages 35-44 will increase by 8%.

The age group comprised of residents age 65 and older is projected to rise by 14% over the next five years, growing by 15,734 residents. This is the fastest-growing age group in the College of the Desert area.

Exhibit 5: Five-year growth, 2019 and 2024 population share by age group, College of the Desert area

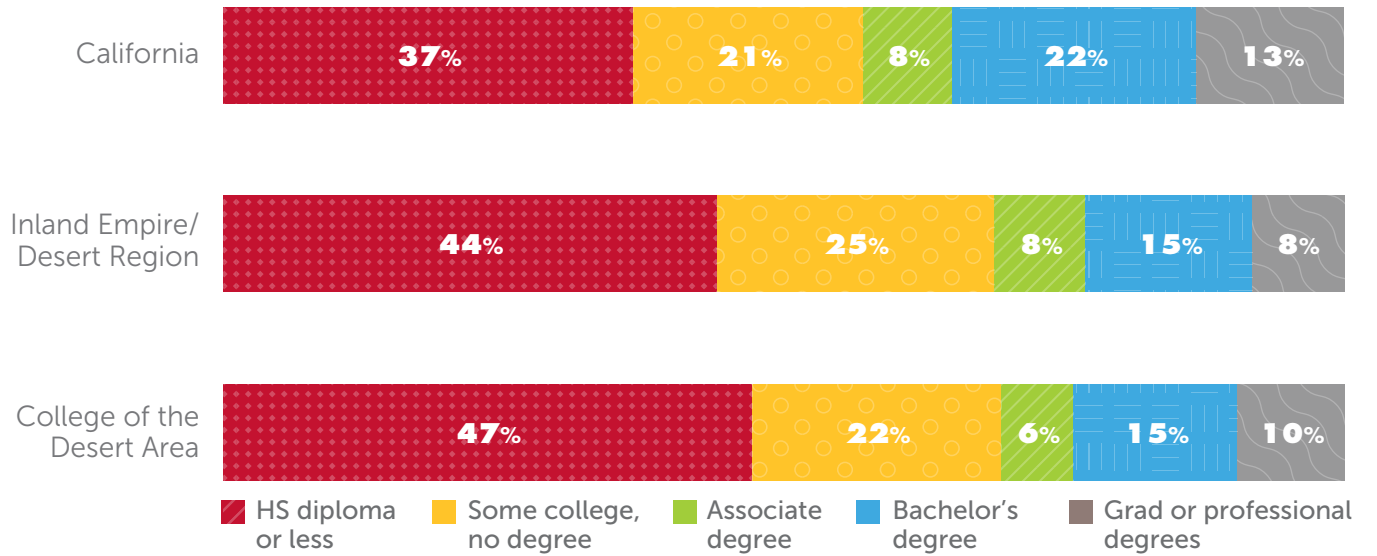


Source: Emsi 20.2

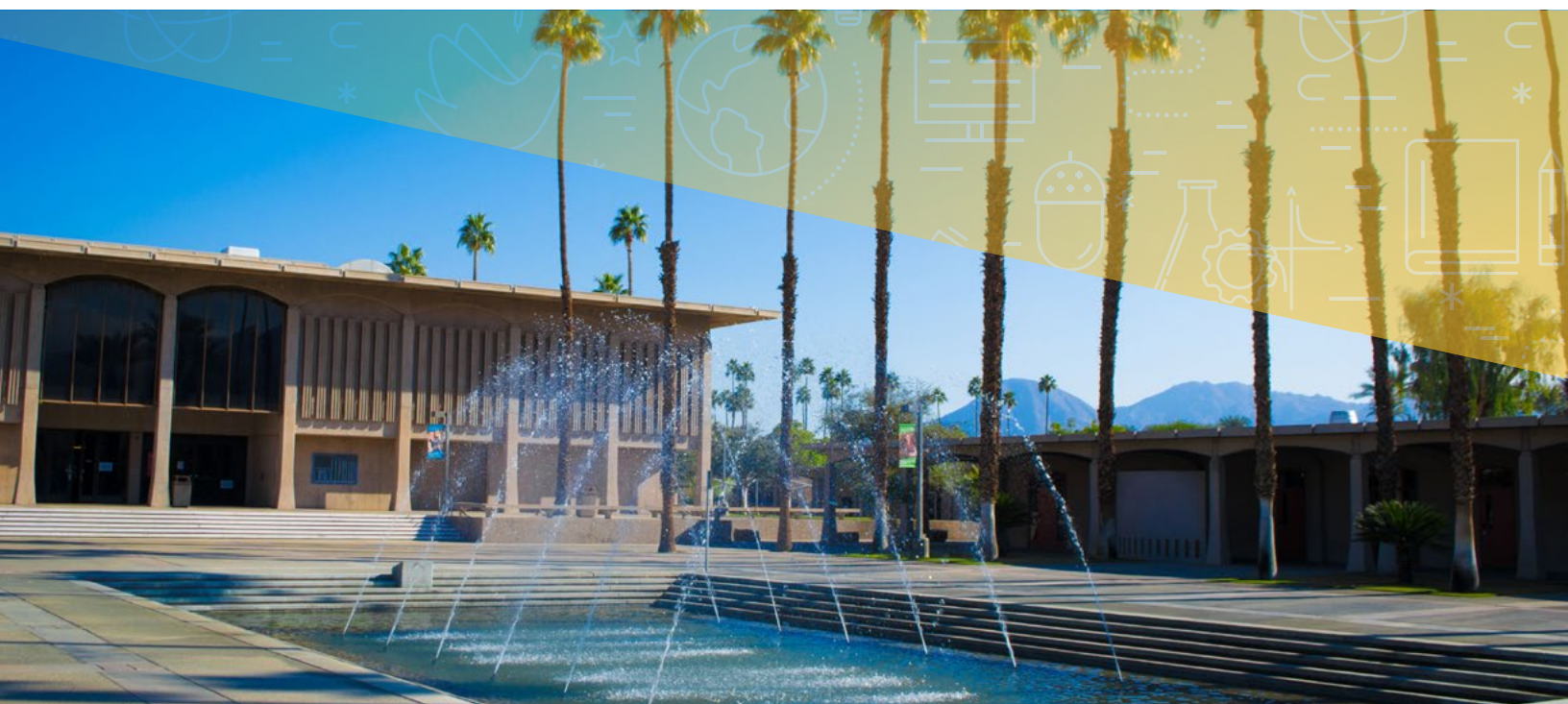
Educational Attainment

Educational attainment refers to the highest level of education that residents age 25 and older have completed. Just under half the residents in the College of the Desert area have a high school diploma or less (47%), a percentage slightly higher than the Inland Empire/Desert Region (44%), and considerably higher than California (37%) (Exhibit 6). The college area also has a slightly smaller share of residents with some form of community college education (some college, no degree or an associate degree), 28% compared to 33% in the Inland Empire/Desert Region. At 25%, the percentage of residents in the college area with a bachelor's degree or higher is slightly higher than the region, 23%, but much less than California, 35%.

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



Source: American Community Survey

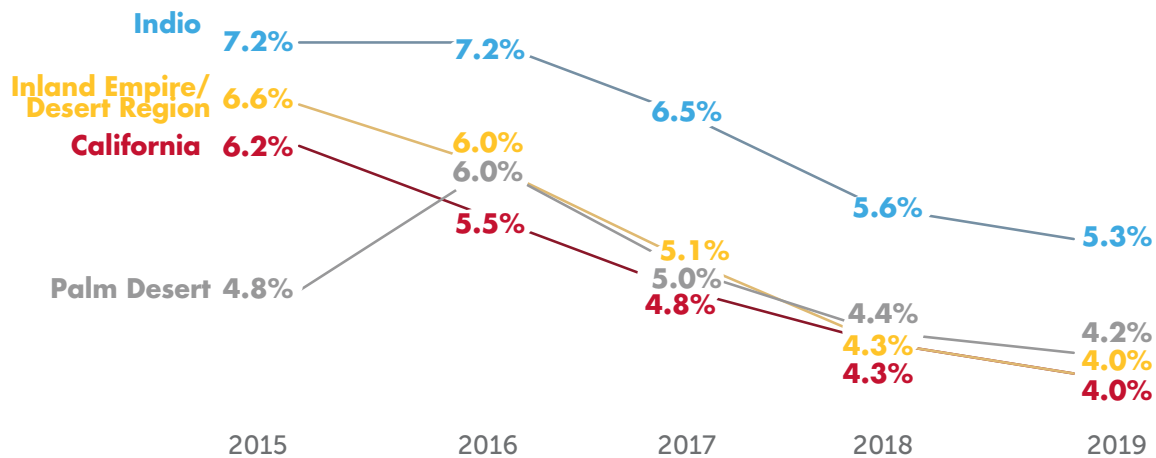


Labor Force and Unemployment Rate

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 Indio has been historically lower 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 2015, the annual average unemployment rate in Palm Desert was 4.8%, or 1,100 residents, while the unemployment rate in Indio was 7.2%, or 2,800 residents. By 2019, the unemployment rate fell to 4.2% in Palm Desert, or 1,000 residents, while the unemployment rate in Indio was 5.3%, with the number of unemployed residents dropping to 2,200.

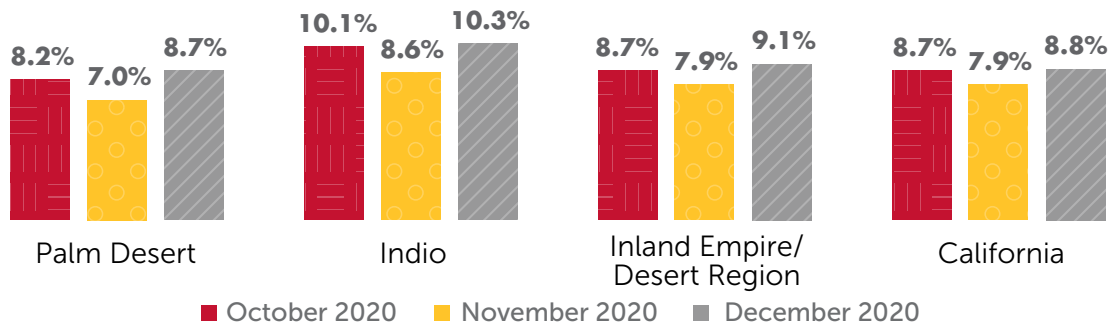
Exhibit 7: Annual average unemployment rate in Palm Desert, Indio, Inland Empire/Desert Region, and California (in percent)



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 the cities of Palm Desert, Indio, the Inland Empire/Desert Region, and California from October 2020 through December 2020. Unemployment rates for each community available in the College of the Desert area is available in the fourth exhibit in Appendix B.

Exhibit 8: Unemployment Rate in Palm Desert, Indio, the Inland Empire/Desert Region, and California, October 2020-December 2020



Source: California Employment Development Department, Labor Market Information Division

INDUSTRY EMPLOYMENT AND BUSINESS ACTIVITY

In 2019, there were 187,370 jobs in the College of the Desert area, accounting for approximately 10.7% of the total regional employment (Exhibit 9). Over the next five years, employment in the College of the Desert area is projected to increase by 8.7%, adding 16,211 jobs. At 8.7%, employment in the College of the Desert area is projected to grow slightly faster than the region overall, 8.4%, and California, 6.0%.

Exhibit 9: Five-year industry employment projections for College of the Desert area, the Inland Empire/Desert Region, and California

	College of the Desert Area	Inland Empire/ Desert Region	California
2019 Jobs	187,370	1,747,341	20,003,848
2024 Jobs	203,579	1,893,522	21,200,103
Jobs Change	16,211	146,181	1,196,255
2019-2024 % Change	8.7%	8.4%	6.0%

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 following industries represented 70% of the jobs in the College of the Desert area:

- Accommodation and food services (29,231 jobs)
- Health care and social assistance (27,248 jobs)
- Retail trade (23,474 jobs)
- Government (22,622 jobs)
- Administrative and support and waste management and remediation services (15,551 jobs)
- Construction (13,657 jobs)

Over the next five years, area employers are expected to increase employment by 16,211 jobs, or 8.7%. The following five major industries are projected to contribute 75.4% of the job growth in the area:

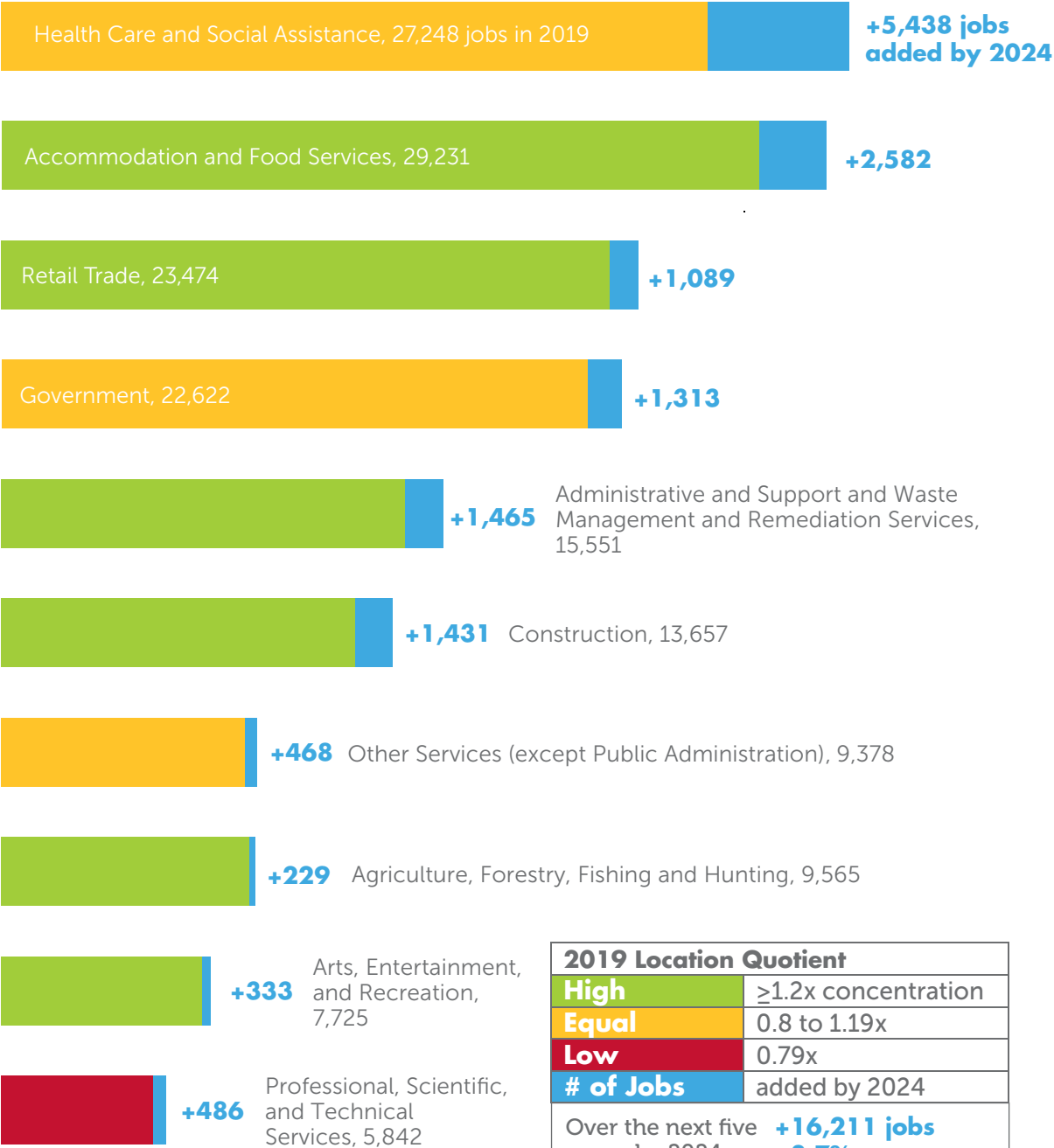
- Health care and social assistance (5,438 jobs added)
- Accommodation and food services (2,582 jobs)
- Administrative and support and waste management and remediation services (1,465 jobs)
- Construction (1,431 jobs)
- Government (1,313 jobs)

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 63% of total jobs in the area (118,126 jobs out of 187,370 total jobs). Ten small major industry groups with fewer than 5,000 jobs, along with key industry terms are displayed in Appendix C.

Exhibit 10: Major industries in the College of the Desert 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 COLLEGE OF THE DESERT AREA

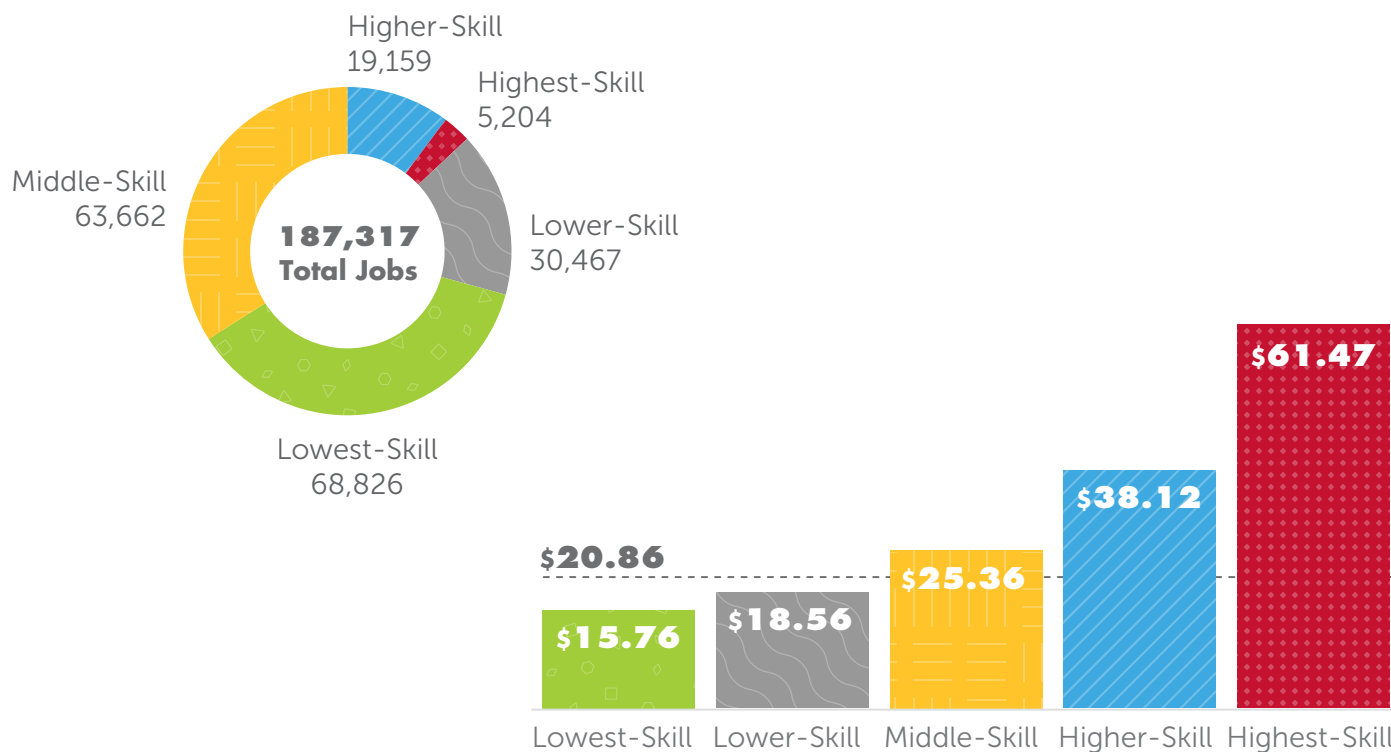
Occupational employment in the area was analyzed in terms of skill level. The California Community Colleges provide education and training that generally prepares workers to enter middle-skill jobs. Middle-skill occupations typically require educational attainment beyond a high school diploma, but less 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 high-demand careers that pay a living wage.

Higher-skill jobs, for this study, 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 educational institution. This assessment does not include occupations that typically require an education beyond a bachelor’s degree, such as physicians, lawyers, and most scientists. Additionally, lowest-skills jobs are also excluded from this report. Definitions for each skill level is available in Appendix D. Military-specific occupations in the College of the Desert area were removed from further analysis (-57 jobs).

Of the 187,317 jobs in the College of the Desert area in 2019, approximately 34% were classified as middle-skill jobs, 37% were lowest-skill, 16% were lower-skill, 10% were higher-skill, and 3% were highest-skill (Exhibit 11). Through 2024, employers expect to have 138,840 job openings to fill newly created positions and as well as existing jobs that workers are permanently vacating (due to occupational transfers and retirements). While most of these opportunities will be in the lower and lowest skill-level occupations, 8,005 middle-skill openings are expected annually in the College of the Desert 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 Inland Empire/Desert Region, even if the job openings are lower in the College of the Desert 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. Complete skill-level definitions are available in Appendix D.

Exhibit 11: Breakdown of total jobs in the college area by skill level with the associated median wage



Source: COE, Emsi 20.2

COLLEGE OF THE DESERT 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 discussed 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.

College of the Desert 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 61 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 **120 unique occupations**, yielding **5,773 annual job openings** within the College of the Desert area. Nearly three-quarters of these job opportunities are middle-skill, totaling 4,180 annual job openings. While there are fewer higher-skill job opportunities available in the area, these openings typically offer a higher wage.

There are additional employment opportunities in the College of the Desert area for which there are currently no relevant training programs being offered. With the appropriate level of education and training, the College of the Desert area's resident population could potentially explore an additional 1,920 annual job openings.





AGRICULTURE AND NATURAL RESOURCES SECTOR

Pathways in the Agriculture and Natural Resources CDE sector integrate academic and technical preparation and focus on career awareness, career exploration, and skill preparation. These seven 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 & Mooney).

Agricultural Business Pathway

In the agricultural business pathway, students learn about agricultural business operations and management. Topics include accounting, finance, economics, business organization, marketing, and sales. Programs in this pathway train two occupations that have a combined total of 145 annual job openings in the College of the Desert area and 309 annual job openings in the region.

College of the Desert programs:

- Agri-Business
- Agriculture Office Assistant
- Agriculture Office Professional

Exhibit 12: Agricultural business 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	1,108	110	230	\$21.41
First-Line Supervisors of Farming, Fishing, and Forestry Workers	220	35	79	\$22.73

Forestry and Natural Resources Pathway

The forestry and natural resources pathway helps students understand the relationships between California's natural resources and the environment. Topics include energy and nutrient cycles, water resources and management, soil conservation, wildlife preservation and management, forest and fire management, and lumber production. In addition, students study the outdoor recreation industry and multiple-use land management. Programs in this pathway train two occupations that have a combined total of four annual job openings in the college area and 83 annual job openings in the region.

College of the Desert programs:

- Desert Ecologist
- Desert Naturalist
- Field Ranger
- Natural Resources

Exhibit 13: Forestry and natural resources middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Forest and Conservation Technicians	29	4	79	\$19.51
Fish and Game Wardens	-	0	4	\$16.56

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. One middle-skill occupation is projected to offer 73 annual job openings in the college area and 267 in the region.

College of the Desert programs:

- Agriculture Irrigation Technician
- Arborist Technician
- Landscape and Irrigation Technician
- Turfgrass Management
- Turfgrass Management Technicians

Exhibit 14: Ornamental horticulture middle-skill occupation

Middle-skill Occupation	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	591	73	267	\$22.64

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. Eight programs in this pathway provide training for two middle-skill occupations and two higher-skill occupations with a combined total of 21 annual job openings in the college area and 157 annual job openings in the region.

College of the Desert programs:

- Agriculture Pest Management
- Agriculture Food Safety
- Agriculture Plant Science
- Agriculture Technician
- Environmental Horticulture
- General Agriculture
- Pest Management Technician
- Plant Science

Exhibit 15: Plant and soil science middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Agricultural and Food Science Technicians	47	6	36	\$21.36
Pesticide Handlers, Sprayers, and Applicators, Vegetation	40	6	23	\$16.20

Exhibit 16: Plant and soil science higher-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Environmental Scientists and Specialists, Including Health	58	7	80	\$41.13
Soil and Plant Scientists	20	2	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 & 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.

Performing Arts Pathway

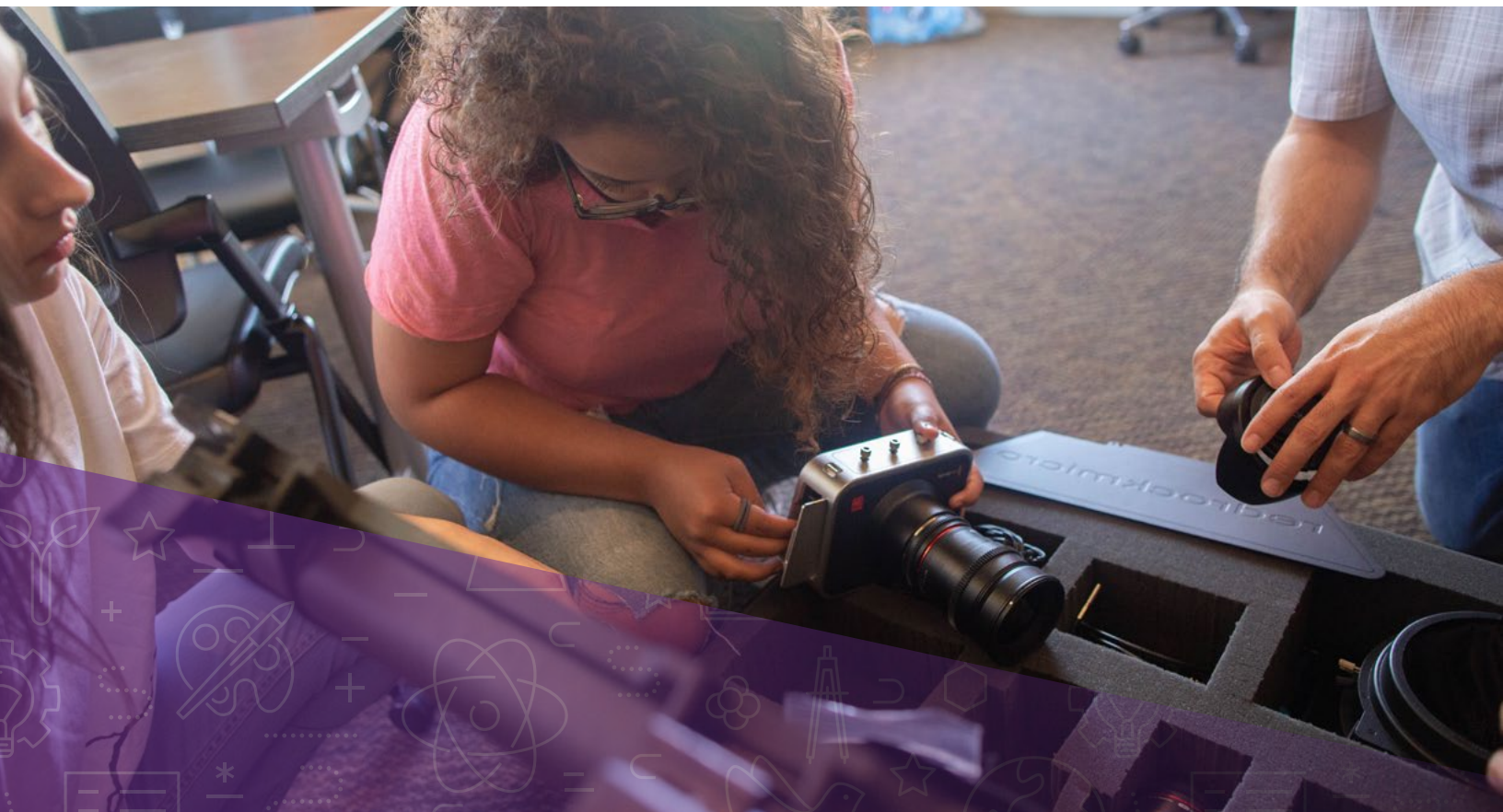
The performing arts pathway focuses on the direct creation of art and entertainment by the individual artist instead of through a secondary physical medium. Performing artists are themselves the medium of creative expression. There is one related higher-skill occupation related to this pathway – music directors and composers – with seven annual job openings in the college area and 85 annual job openings in the region.

College of the Desert programs:

- Advanced Commercial Music
- Basic Commercial Music

Exhibit 17: Performing arts higher-skill occupation

Higher-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Music Directors and Composers	52	7	85	\$22.59



Production and Managerial Arts Pathway

Whatever the form or medium of creative expression, all careers in the arts, media, and entertainment sector require “publication” or a public presentation in one form 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. Programs in this pathway train for one middle-skill occupation with 11 annual job openings in the college area and 87 annual job openings in the region, and three higher-skill occupations with 30 annual job openings in the college area and 183 annual job openings in the region.

College of the Desert programs:

- Advanced Film Production
- Basic Film Production
- Basic Radio Production
- Film Production
- Film, TV, and Electronic Media
- Journalism

Exhibit 18: Production and managerial arts middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Audio and Video Equipment Technicians	84	11	87	\$18.65

Exhibit 19: 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
Art Directors	114	16	100	\$24.62
Producers and Directors	96	11	58	\$30.34
Film and Video Editors	30	3	25	\$40.40



BUILDING AND CONSTRUCTION TRADES SECTOR

Programs related to the building and construction trades 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 & Dunn).

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 in the way in which these structures are built (with preparation for a Class B California License). Programs in this pathway provide training for three middle-skill occupations with a combined total of 163 annual job openings in the college area and 1,646 annual job openings in the region.

College of the Desert programs:

- Building Inspection Technology
- Construction Management

Exhibit 20: 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
First-Line Supervisors of Construction Trades and Extraction Workers	751	96	1,000	\$32.24
Construction Managers	552	50	482	\$32.46
Construction and Building Inspectors	115	17	164	\$40.80

Mechanical Systems Installation and Repair Pathway

Aside from the programs listed above, there are other building and construction trades program opportunities that College of the Desert may choose to offer training for, as these occupations have a significant number of annual openings in the college service area and the region. Additional building and construction trades occupations will offer a total of 659 annual openings in the college area and 6,521 annual openings in the region.

The mechanical systems installation and repair pathway provides students with competencies fundamental for preparing for employment or advanced training in heating, ventilation, air-conditioning (HVAC) and appliance installation, maintenance, and repair. This pathway includes preparation for a Class C California License and EPA certification, and trains for one middle-skill occupation offering 58 annual job openings in the college area and 572 annual job openings in the region.

College of the Desert programs:

- Air Conditioning and Refrigeration
- Air Properties and Economizer Performance
- Building Automation Control
- Commercial Gas Heating
- Facilities Operation Technician
- Green HVAC Commercial
- Green HVAC Residential
- Heat Pumps
- Proper HVAC System Preparation
- Refrigerant Management and EPA-608 Preparation
- Residential Gas Heating

Exhibit 21: Mechanical systems installation and repair middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	401	58	572	\$19.96

Additional Building and Construction Trades Training Opportunities

Aside from the occupations listed above, there are other program opportunities in building and construction trades that College of the Desert may choose to consider providing training for, as these occupations have a substantial number of annual openings in the college's service area and region. An additional eight middle-skill building and construction occupations will offer a total of 639 annual openings in the college area and 6,236 annual openings in the region. Civil engineers is a higher-skill occupation offering 20 annual job openings in the college area, 285 annual job openings in the region.

Exhibit 22: Building and construction trade training opportunities

Building and Construction Trades Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Carpenters	2,388	291	2,591	\$22.93
Electricians	832	129	1,365	\$24.28
Plumbers, Pipefitters, and Steamfitters	645	100	983	\$24.48
Operating Engineers and Other Construction Equipment Operators	341	46	554	\$38.15
Structural Iron and Steel Workers	155	25	237	\$32.33
Sheet Metal Workers	152	22	261	\$24.15
Civil Engineers (Higher-skill)	205	20	285	\$52.01
Glaziers	92	15	125	\$29.05
Brickmasons and Blockmasons	94	11	120	\$24.57





BUSINESS AND FINANCE SECTOR

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

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 prepare students for employment in seven middle-skill occupations (a total of 542 annual job openings in the college area and 5,597 in the region) and seven higher-skill occupations (a total of 460 annual job openings in the college area and 4,781 in the region).

College of the Desert programs:

- Applications and Information Systems
- Business Administration
- Business Information Worker
- Business Information Worker – Manager
- General Business
- Human Resource Generalist
- Retail Management
- Small Business

Exhibit 23: 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	2,266	270	2,760	\$18.58
First-Line Supervisors of Office and Administrative Support Workers	1,517	175	1,750	\$26.41
Executive Secretaries and Executive Administrative Assistants	339	38	397	\$28.13
Administrative Services Managers	234	24	259	\$47.33
Data Entry Keyers	142	16	199	\$15.26
Human Resources Assistants, Except Payroll and Timekeeping	120	15	182	\$19.65
Compensation, Benefits, and Job Analysis Specialists	35	4	50	\$32.85

Exhibit 24: 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	2,041	222	2,162	\$48.54
Managers, All Other	976	93	920	\$34.61
Management Analysts	540	60	679	\$37.83
Human Resources Specialists	378	48	607	\$29.60
Chief Executives	265	21	204	\$78.12
Human Resources Managers	114	12	152	\$54.47
Labor Relations Specialists	42	4	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. College of the Desert's accounting program provides broad financial training that prepares students for employment in four middle-skill occupations that have 278 annual job openings in the college area and 2,701 annual job openings in the region, as well as two higher-skill occupations that have 102 annual job openings in the college area and 971 annual job openings in the region.

College of the Desert program:

- Accounting

Exhibit 25: Financial services middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Bookkeeping, Accounting, and Auditing Clerks	1,731	218	2,079	\$19.60
Payroll and Timekeeping Clerks	189	22	238	\$22.56
Bill and Account Collectors	183	22	261	\$18.60
Tax Preparers	121	16	123	\$16.73

Exhibit 26: Financial services higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Accountants and Auditors	888	99	934	\$33.75
Budget Analysts	29	3	37	\$33.17

Additional Business and Finance Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the financial services pathway. Three additional business and finance higher-skill occupations will offer a total of 82 annual openings in the college area and 767 annual openings in the region.

Exhibit 27: Business and finance sector 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
Financial Managers	406	41	421	\$53.14
Loan Officers	243	21	224	\$26.98
Personal Financial Advisors	233	20	122	\$36.52





EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES SECTOR

Students in pathways related to this sector acquire the skills needed to pursue a career in childcare, family, social services, or teaching (Heuvel & Ford). Students enrolled in these programs will be qualified to enter the occupations listed below, many of which are higher-skill occupations that are in high demand. This industry sector has four pathways: child development, consumer services, education, and family and human services.

Child Development and Education Pathways

The child development pathway provides students with the training needed to enter middle-skill childcare jobs while the education pathway prepares teachers. Most teaching jobs require a bachelor's degree and a state credential to enter employment. Community college programs provide foundational training for future educators. Programs in this pathway prepare students for employment in 17 middle- and higher-skill occupations that have a combined total of 1,088 annual job openings in the college area and 11,636 annual job openings in the region. Most job opportunities in this pathway are for higher-skill teacher occupations that generally require a bachelor's degree to enter employment.

College of the Desert programs:

- Associate Teacher
- Early Childhood Education
- Early Childhood Education Associate Teacher
- Early Childhood Education Master Teacher
- Early Childhood Education Site Supervisor
- Early Childhood Education Teacher
- Elementary Teacher Assistant Special Education
- Elementary Teacher Assistant Special Education, Bilingual
- Elementary Teacher Education
- Family Child Care

Exhibit 28: 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	1,806	224	2,469	\$16.84
Childcare Workers	1,445	214	2,008	\$12.04
Preschool Teachers, Except Special Education	374	42	413	\$14.36
Special Education Teachers, Preschool	50	5	51	\$12.07

Exhibit 29: 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	1,975	183	1,962	\$42.88
Substitute Teachers	1,203	158	1,788	\$18.05
Secondary School Teachers, Except Special and Career/Technical Education	1,070	98	1,034	\$40.49
Teachers and Instructors, All Other	331	46	615	\$16.79
Middle School Teachers, Except Special and Career/Technical Education	328	35	352	\$39.99
Special Education Teachers, Kindergarten and Elementary School	195	19	203	\$37.82
Education, Training, and Library Workers, All Other	143	15	217	\$18.94
Kindergarten Teachers, Except Special Education	110	14	144	\$34.17
Special Education Teachers, Secondary School	107	11	114	\$43.18
Education Administrators, All Other	68	7	86	\$52.01
Career/Technical Education Teachers, Secondary School	79	7	79	\$39.70
Education Administrators, Preschool and Childcare Center/Program	67	6	55	\$18.27
Special Education Teachers, Middle School	39	4	46	\$38.72

Additional Education, Child Development, and Family Service Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the family and human services pathway. Programs related to this pathway train occupations that offer family assistance. Two additional higher-skill occupations will offer a total of 44 annual openings in the college area and 399 annual openings in the region.

Exhibit 30: Education, child development, and family services 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
Child, Family, and School Social Workers	182	25	234	\$25.85
Community and Social Service Specialists, All Other	128	19	165	\$23.93



ENERGY, ENVIRONMENT, AND UTILITIES SECTOR

Students enrolled in coursework related to this sector gain real-world, occupationally relevant knowledge, skills, and experiences of significant scope and depth in environmental resources, energy and power technology, and telecommunications (McCabe & Yates).

Energy and Power Technology Pathway

The energy and power technology pathway prepares students for careers in the energy and power industries. Programs in this pathway prepare students for employment in five middle-skill occupations with 30 annual job openings in the college area. Employment for these occupations is higher in the region with 264 projected annual job openings. Training in this pathway may also be in demand by employers of traditional occupations within the building and construction trades sector.

College of the Desert programs:

- Building and Energy Systems Professionals
- Building Commissioning Technician
- Building Energy Consultant
- Lighting and Controls Technology
- Power Generation and Distribution
- Residential Solar
- Residential Solar Installation
- Residential Solar Surveying and Planning
- Solar Battery Storage Installation and Maintenance
- Solar Site Planning Project
- Zero Net Energy (ZNE)
- Zero Net Energy (ZNE) Technology

Exhibit 31: Energy and power technology middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Electrical Power-Line Installers and Repairers	104	11	148	\$35.93
Power Plant Operators	60	8	28	\$41.58
Solar Photovoltaic Installers	22	5	52	\$19.15
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	35	4	23	\$43.98
Power Distributors and Dispatchers	17	2	12	\$45.92

Additional Energy, Environment, and Utilities Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the energy, environment, and utilities sector. Three additional middle-skill occupations will offer a total of 74 annual openings in the college area and 728 annual openings in the region.

Exhibit 32: 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	349	45	403	\$26.71
Telecommunications Line Installers and Repairers	111	15	179	\$25.59
Water and Wastewater Treatment Plant and System Operators	150	14	146	\$32.87





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 that emphasize real-world, occupationally relevant experiences of significant scope and depth: 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. College of the Desert's programs related to the architectural design pathway prepare students for employment in two middle-skill occupations that have 18 annual job openings in the college area and 144 annual job openings in the region, as well as two higher-skill occupations that have 14 annual job openings in the college area and 203 annual job openings in the region.

College of the Desert programs:

- Architectural Technology
- General Drafting

Exhibit 33: Architectural design middle-skill occupation

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Architectural and Civil Drafters	95	12	123	\$27.44
Drafters, All Other	14	2	21	\$20.09

Exhibit 34: Architectural design higher-skill occupations

Higher-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Architects, Except Landscape and Naval	116	12	102	\$35.82
Architectural and Engineering Managers	64	6	101	\$70.20



HEALTH SCIENCE AND MEDICAL TECHNOLOGY SECTOR

Students enrolled in coursework related to the health science and medical technology 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.

Patient Care Pathway

The patient care pathway provides training in the prevention, treatment, and management of illness, including mental health and physical well-being. Programs in this pathway provide training for five middle-skill occupations with a combined total of 502 annual job openings in the college area and 4,893 annual job openings in the region.

College of the Desert programs:

- Registered Nursing
- Sports Medicine
- Vocational Nursing

Exhibit 35: 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	3,034	255	2,616	\$47.45
Nursing Assistants	904	146	1,311	\$15.62
Licensed Vocational Nurses	796	84	809	\$25.10
Physical Therapist Assistants	51	11	103	\$34.61
Occupational Therapy Assistants	29	6	54	\$34.50

Additional Patient Care Pathway Training Opportunities

Aside from the occupations listed above, there are other patient care opportunities that College of the Desert may consider providing training for, as these occupations have a substantial number of annual openings in the Inland Empire/Desert Region. Training opportunities exist for four middle-skill occupations with a total of 60 annual job openings in the college area and 611 annual job openings in the region.

Exhibit 36: Patient care pathway training opportunities

Patient Pathway Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Dental Hygienists	162	18	186	\$45.41
Respiratory Therapists	180	16	150	\$35.39
Radiologic Technologists	170	15	140	\$36.03
Surgical Technologists	97	11	135	\$27.39

Health Care Administrative Services Pathway

Health care administrative programs prepare students for employment as site administrators, managers, attorneys, receptionists, secretaries, billing and coding specialists, health informatics technicians, accountants, managers, and other knowledge workers that support the process of patient care. Two middle-skill occupations in this pathway account for 248 annual job openings in the college area and 2,382 annual job openings in the region.

College of the Desert program:

- Business Information – Medical Office Specialist

Exhibit 37: 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	965	135	1,287	\$15.23
Medical Secretaries	795	113	1,095	\$17.40

Public and Community Health Pathway

The standards for the public and community health pathway apply to occupations or functions involved primarily in environmental health, community health and health education, epidemiology, disaster management, and geriatrics. The standards specify the knowledge and skills needed by professionals pursuing careers in this pathway. There are two middle-skill occupations with related programs in this pathway, offering a total of 99 annual job openings in the college area and 795 annual job openings in the region, as well as five higher-skill occupations, with a total of 170 annual job openings in the college area and 1,517 annual job openings in the region.

College of the Desert programs:

- Alcohol and Drug Studies
- Public Health Science

Exhibit 38: Public and community health middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Social and Human Service Assistants	528	90	713	\$17.90
Community Health Workers	59	9	82	\$23.48

Exhibit 39: Public and community health higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	467	64	532	\$21.24
Medical and Health Services Managers	319	38	401	\$56.33
Social and Community Service Managers	231	34	249	\$30.62
Social Workers, All Other	212	27	263	\$33.84
Health Educators	48	7	72	\$40.78

Additional Health Science and Medical Technology Sector Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the health care occupational support and biotechnology pathways. Training opportunities exist for three middle-skill occupations with a total of 62 annual job openings in the college area and 586 annual job openings in the region.

Exhibit 40: Health science and medical technology training opportunities

Health Science And Medical Technology Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Clinical Laboratory Technologists and Technicians	223	25	194	\$24.72
Healthcare Support Workers, All Other	141	20	208	\$21.26
Medical Records and Health Information Technicians	201	17	184	\$22.44





HOSPITALITY, TOURISM, AND RECREATION SECTOR

Hospitality, tourism, and recreation coursework prepares students to enter food service, recreation, and hospitality employment (Heuvel & Wright).

Food Science, Dietetics, and Nutrition Pathway

The food science, dietetics, and nutrition pathway focuses on three specializations centered on the science of food and its relationship to the health and well-being of individuals. Students pursuing this career pathway learn about industry awareness; food safety and sanitation; workforce and organizational management; food, fitness, and wellness; nutritional requirements and processes; food chemistry and technology; research and product development; and marketing and public relations. Relatively few annual job openings exist for occupations in this pathway with five annual openings projected for dietetic technicians, and eight job openings projected for dietitians and nutritionists in the college area. Annual job openings are slightly higher in the region, with 47 and 85 annual job openings, respectively for the two occupations.

College of the Desert program:

- Nutrition and Dietetics

Exhibit 41: Food science, dietetics, and nutrition middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Dietetic Technicians	48	5	47	\$15.27

Exhibit 42: Food science, dietetics, and nutrition higher-skill occupation

Higher-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Dietitians and Nutritionists	87	8	85	\$34.97



Food Service and Hospitality Pathway

Students in the food service and hospitality pathway acquire 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. Programs in this pathway train for three middle-skill occupations with a total of 385 annual openings in the college area and 2,813 annual openings in the region.

College of the Desert programs:

- Baker
- Basic Culinary Arts
- Bread Baker
- Culinary Management
- Intermediate Culinary Arts
- Prep Cook

Exhibit 43: 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	1,256	240	1,908	\$14.94
Food Service Managers	695	93	653	\$20.87
Chefs and Head Cooks	344	52	252	\$20.24

Hospitality, Tourism, and Recreation Pathway

The hospitality, tourism, and recreation pathway integrates various facets of the hospitality industry: lodging, travel, and tourism; event planning, theme parks, attractions, and exhibitions; and recreation. Students gain industry-specific knowledge related to industry awareness, organizational management, customer service, sales and marketing, facilities management, lodging, travel destinations, as well as reservations, ticketing, and itineraries. Programs in this pathway prepare students for employment in five middle-skill occupations (275 annual job openings in the college area and 1,910 in the region) and one higher-skill occupation (48 annual job openings in the college area and 368 in the region).

College of the Desert programs:

- Advanced First Aid and Safety, CPR/AED
- Fitness Specialist
- Golf Management
- Hospitality Management
- Lifeguard Training
- Personal Training
- Water Safety Instructor
- Yoga Teacher Training

Exhibit 44: Hospitality, tourism, and recreation middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Recreation Workers	512	99	745	\$12.61
Fitness Trainers and Aerobics Instructors	424	84	695	\$18.92
First-Line Supervisors of Housekeeping and Janitorial Workers	377	50	271	\$19.80
First-Line Supervisors of Gaming Workers	145	17	146	\$27.77
Lodging Managers	227	25	53	\$35.65

Exhibit 45: Hospitality, tourism, and recreation higher-skill occupation

Higher-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Coaches and Scouts	283	48	368	\$17.25

Additional Hospitality, Tourism, and Recreation Training Opportunity

Future program development by College of the Desert may focus on the following occupation related to hospitality, tourism, and recreation. Meeting, convention, and event planners, a higher-skill occupation, is expected to offer 23 annual job openings in the college area and 125 annual job openings in the region.

Exhibit 46: Hospitality, tourism, and recreation training opportunity

Hospitality, Tourism, and Recreation Training Opportunity, Higher-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Meeting, Convention, and Event Planners	167	23	125	\$22.96



INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

Information and communication technologies programs prepare students to meet the rapid changes in computer, networking, and software fields. Although most employers in this sector often seek candidates with a bachelor's degree, job opportunities also exist for those with a community college education (McCabe & Page). This sector contains the information support and services, networking, software and systems development, and the game and simulation pathways. College of the Desert provides programs in the information support and services pathway, leading to high-wage, high-growth job opportunities.

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. There is one related program training for one middle-skill occupation in this pathway. Computer user support specialists is expected to have 28 annual job openings in the college area and 390 annual job openings in the region. The pathway also leads to employment in three higher-skill occupations with 27 annual job openings in the college area and 387 annual job openings in the region.

College of the Desert program:

- Computer Information Systems

Exhibit 47: 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	273	28	390	\$26.11

Exhibit 48: Information support and services higher-skill occupations

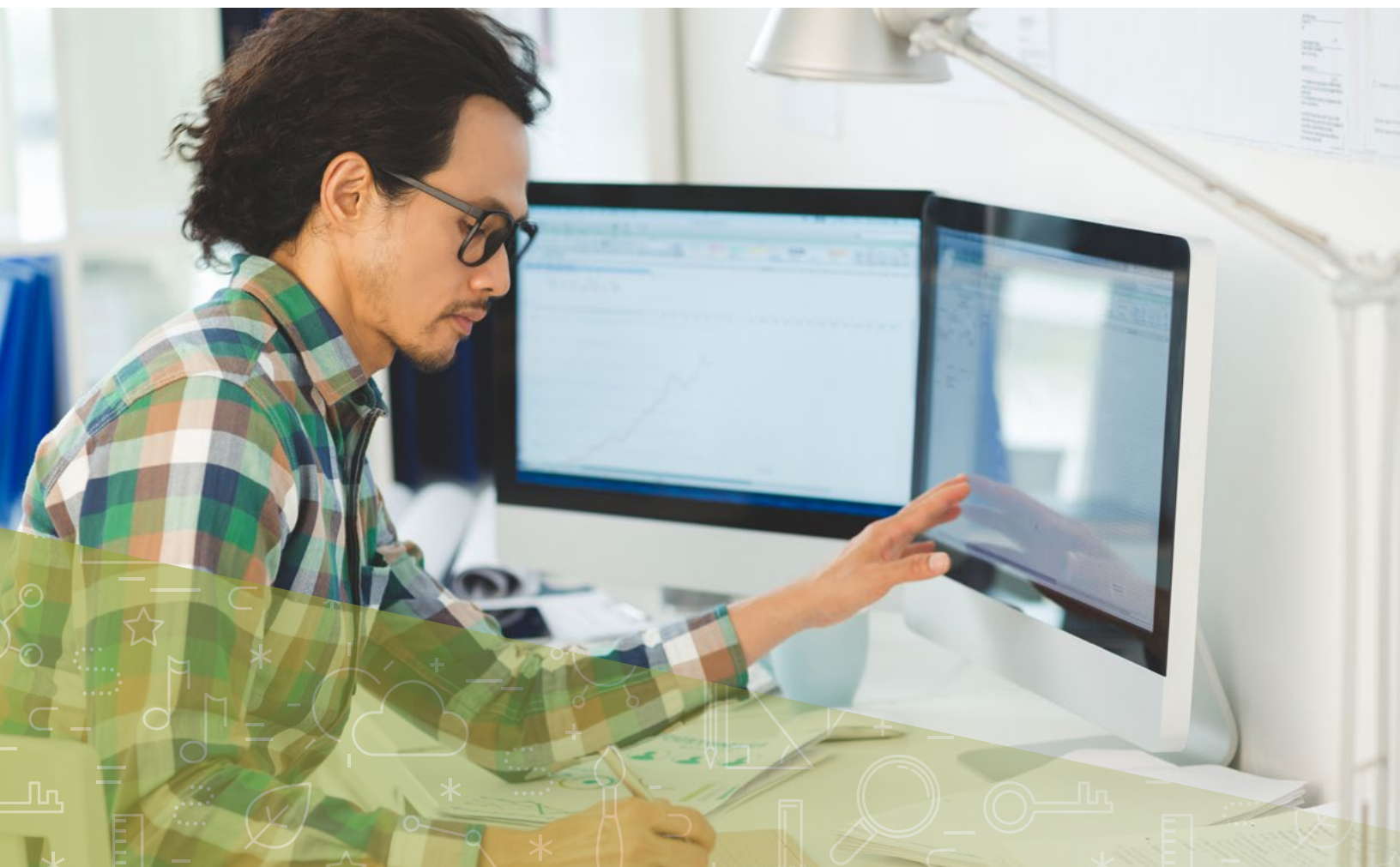
Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Computer Systems Analysts	132	12	186	\$39.87
Computer and Information Systems Managers	107	11	152	\$68.15
Database Administrators	43	4	49	\$46.72

Additional Information and Communication Technologies Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the networking, software and systems development, and games and simulation pathways. Three middle-skill occupations and two higher-skill occupations in the ICT field account for 52 annual job openings in the college area and 730 annual job openings in the region.

Exhibit 49: Information and communications technologies training opportunities

Information and Communications Technologies Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Software Developers, Applications (Higher-skill)	136	16	237	\$48.70
Network and Computer Systems Administrators	137	12	158	\$38.48
Web Developers	86	9	109	\$24.36
Computer Network Support Specialists	80	8	108	\$28.00
Software Developers, Systems Software (Higher-skill)	72	7	118	\$48.83





MANUFACTURING AND PRODUCT DEVELOPMENT SECTOR

Manufacturing and product development coursework teaches students the hands-on fundamentals of manufacturing processes and systems in California (McCabe & Oliveira). Pathways in this sector include: graphic production technologies, machining and forming technologies, welding and materials joining, and product innovation and design.

Graphic Production Technologies Pathway

The graphic production technologies pathway provides students with an understanding of printing and manufacturing processes and systems common to careers in the graphic arts and printing technology industries. Representative topics include the principles of design composition, graphic design and layout, typography, image generation and file preparation, photography, digital imaging, prepress preparation, printing and screen printing technologies, binding and finishing processes, multimedia blending, business and entrepreneurship principles, prototype product design, computer-aided design, and computer-aided manufacturing. Two middle-skill occupations account for 46 annual job openings in the college area and 401 annual job openings in the region.

College of the Desert programs:

- Photography
- Digital Design and Production

Exhibit 50: Graphic production technologies middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Graphic Designers	284	33	255	\$20.71
Photographers	126	13	146	\$20.05

Additional Manufacturing and Product Development Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the machining and forming technologies, welding and materials joining, and product innovation and design pathways. Related occupations account for 292 annual job openings in the college area and 3,055 annual job openings in the region, with the majority of openings in middle-skill occupations.

Exhibit 51: Manufacturing and product development training opportunities

Manufacturing and Product Development Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Maintenance and Repair Workers, General	1,860	215	1,684	\$19.84
First-Line Supervisors of Production and Operating Workers	301	37	589	\$28.35
Industrial Machinery Mechanics	154	18	301	\$27.95
Industrial Production Managers	75	7	132	\$47.52
Electrical and Electronics Engineering Technicians	57	6	107	\$29.45
Mechanical Engineers (Higher-skill)	56	5	123	\$40.53
Industrial Engineers (Higher-skill)	38	4	119	\$38.44



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 & 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.

Marketing Pathway

The marketing pathway includes both creative and systems processes, as well as marketing concepts and principles and their practical application in marketing and management. Subject matter includes market research, economics, marketing budgets, creative development and design, and marketing foundations/ functions with an emphasis on public relations, advertising, branding, promotion, product/service management, pricing, and distribution. Specialized programs of study in this field may include sports marketing, hospitality marketing, advertising, or market research. This pathway provides skills that prepare students for employment in one middle-skill and four higher-skill occupations. These occupations are expected to have a combined total of 333 annual job openings in the college area and 3,570 annual job openings in the region.

College of the Desert programs:

- Business Information – Marketing Specialist
- Social Media Marketing

Exhibit 52: Marketing middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Customer Service Representatives	1,623	234	2,658	\$17.44

Exhibit 53: Marketing higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Market Research Analysts and Marketing Specialists	446	59	591	\$26.18
Public Relations Specialists	190	26	177	\$29.25
Marketing Managers	106	12	130	\$48.04
Advertising and Promotions Managers	15	2	14	\$44.58

Professional Sales Pathway

Programs in the professional sales pathway develop knowledge and skills in the theory and practice of sales designed to provide a professional foundation to those involved 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. Within this pathway, College of the Desert offers a real estate program that trains for three middle-skill occupations with a total of 126 annual job openings in the college area and 708 annual job openings in the region.

College of the Desert program:

- Real Estate Development

Exhibit 54: 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	845	86	476	\$26.42
Real Estate Brokers	296	30	168	\$37.66
Appraisers and Assessors of Real Estate	117	10	64	\$28.30

Additional Marketing, Sales, and Services Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the Marketing, Sales, and Service Sector. Three middle-skill occupations related to marketing, sales, and services are projected to offer 295 annual job openings in the college area and 3,616 annual job openings in the region while two higher-skill occupations will offer 63 annual job openings and 728 annual job openings in the region.

Exhibit 55: 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, Services, All Other	1,122	164	1,437	\$22.92
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	809	95	1,777	\$27.77
Sales Managers (Higher-skill)	505	51	559	\$43.00
First-Line Supervisors of Non-Retail Sales Workers	350	36	402	\$24.90
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products (Higher-skill)	101	12	169	\$34.64



PUBLIC SERVICES SECTOR

Public services coursework includes public safety, emergency response, and legal practices (McCabe & Beck). The following pathways comprise this industry: public safety, emergency response, and legal practices. College of the Desert offers seven programs related to the public service sector that prepare students for employment in 11 middle-skill occupations.

Emergency Response Pathway

The emergency response pathway encompasses standards for designing student coursework in preparation for a number of careers in this field. The standards provide the foundation for further professional education and training at a postsecondary level, leading to certification and employment. By mastering these standards, 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 two middle-skill occupations with a combined total of 48 annual job openings in the college area and 549 annual job openings in the region.

College of the Desert programs:

- Basic Fire Fighter
- Emergency Medical Services
- Emergency Medical Technicians
- Fire Technology

Exhibit 56: 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	249	22	280	\$15.49
Firefighters	303	26	269	\$30.40



Public Safety Pathway

This pathway is designed for students who want to pursue a career in law enforcement or through related public safety employers. College of the Desert offers administration of justice and police academy programs within this pathway. Six middle-skill public safety occupations are expected to have a combined total of 137 annual job openings in the college area and 1,420 annual job openings in the region. One higher-skill occupation will have 12 annual job openings in the college area and 125 annual job openings in the region.

College of the Desert programs:

- Administration of Justice
- Police Science
- Reserve Police Officer

Exhibit 57: 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	675	59	628	\$47.03
Correctional Officers and Jailers	471	43	463	\$38.33
First-Line Supervisors of Protective Service Workers, All Other	148	19	154	\$18.18
Detectives and Criminal Investigators	89	7	85	\$49.12
First-Line Supervisors of Correctional Officers	57	4	45	\$48.36
Forensic Science Technicians	31	5	45	\$35.39

Exhibit 58: 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	120	12	125	\$38.66

Legal Practices Pathway

Programs in the legal practices pathway prepare students with a broad foundation of knowledge and basic skills necessary for a variety of legal professions. Three middle-skill occupations related to this pathway are expected to offer 49 annual job openings in the college area and 465 annual job openings in the region.

College of the Desert program:

- Business Information – Legal Office Specialist

Exhibit 59: 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	197	28	262	\$27.46
Legal Secretaries	149	17	152	\$25.39
Legal Support Workers, All Other	39	4	51	\$25.83



TRANSPORTATION SECTOR

Transportation pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in three areas: operations, structural repair and refinishing, and systems diagnostics, service, and repair.

Systems Diagnostics, Services, and Repair Pathway

This pathway prepares students for employment in transportation systems, including motor vehicles, rail systems, and small-engine equipment. College of the Desert offers 15 programs in this pathway that prepare students for employment in five related middle-skill occupations with a combined total of 183 annual job openings in the college area and 2,159 annual job openings in the region.

College of the Desert programs:

- Advanced Transportation Technologies
- Automotive Air Conditioning
- Automotive Alternative Fuels
- Automotive Braking Systems
- Automotive Electrical Automotive Emissions
- Automotive Engine Management
- Automotive Quick Service
- Automotive Technology
- Automotive Terminology
- Automotive Transmission and Axle
- General Automotive Service
- Hybrid, Fuel-Cell, Electric Vehicle
- Light and Medium Duty Diesel
- Steering, Suspension, and Alignment

Exhibit 60: 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	1,092	115	1,217	\$19.51
Bus and Truck Mechanics and Diesel Engine Specialists	263	29	483	\$24.05
Mobile Heavy Equipment Mechanics, Except Engines	155	18	240	\$30.12
Automotive Body and Related Repairers	142	17	167	\$18.48
Recreational Vehicle Service Technicians	31	4	52	\$19.45

Additional Transportation Training Opportunities

Future program development by College of the Desert may focus on the following occupations related to the operations and structural repair and refinishing pathways. Four additional middle-skill occupations will offer a total of 214 annual openings in the college area and 5,334 annual openings in the region.

Exhibit 61: Transportation training opportunities

Transportations Training Opportunities, Middle-skill	College Area 2019 Jobs	College Annual Openings	Regional Annual Openings	Median Hourly Earnings
Heavy and Tractor-Trailer Truck Drivers	1,246	171	4,395	\$21.57
Production, Planning, and Expediting Clerks	244	31	537	\$22.06
Transportation, Storage, and Distribution Managers	96	9	279	\$41.71
Cargo and Freight Agents	16	3	123	\$23.15



ADDITIONAL CDE SECTORS AND CAREER OPPORTUNITIES

The Fashion and Interior Design is the only CDE sector for which the College of the Desert does not offer programs. College of the Desert may choose to consider expanding its CE offerings in this sector; please review the sector description for further information.

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 low wages. The occupation with the highest wage in this sector is interior designers. Despite the \$23.58 median hourly wage, this occupation only has 72 annual job openings in the region and is therefore not recommended for program expansion. Please review program offerings from other community colleges and postsecondary education providers to ensure the region is not over saturating the regional labor market with programs training for this occupation.



KEY FINDINGS AND RECOMMENDATIONS

Key findings

The area served by the College of the Desert is expected to add 28,239 residents over the next five years, increasing the population by 6.2%. The college area population is expected to grow faster than the region (4.3% growth) and the state as a whole (2.3% growth). More than 55% of the growth (represented by the addition of 15,734 residents) is expected to be adults age 65 and older, the fastest growing population group in the college area over the next five years. This age group's projected rapid increase may indicate an increased need for health care services for an aging population and increased demand for leisure activities. The number of residents age 9 and younger is expected to increase by 9% by 2024. Growth in this age group suggests a potential influx of college students within the next 20 years. This age group represents a significant portion of the college's future student 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 College of the Desert area, 6% of residents hold an associate degree, and 22% have completed some college, no degree, a category that is slightly smaller than the overall region. The proportion of residents with a high school diploma or less (47%) in the college area, is a relatively substantial share of the population and slightly higher than the region (44%), and much higher than the state (37%). The smaller percentage of residents with an associate degree or less indicates that the college should increase its outreach efforts and attract new students to improve community-college-level educational attainment in the area. The share of residents holding a bachelor's degree or higher (25%) is slightly greater than the region (23%) but less than the state overall (35%).

College of the Desert 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 394 combined annual job openings in the college area and 3,005 annual job openings in the region. Despite the high number of regional annual job openings, none of these occupations offers a median hourly wage that meets or exceeds the \$20.86 per hour standard.

College of the Desert has opportunities to expand educational offerings in 10 of its related CDE sectors to meet the need for more workers in the area served by the college. In sum, there are 1,920 annual job openings for occupations related to the 10 sectors. The sectors and their respective annual job openings in the college's area are:

- Building and Construction Trade: 659 annual job openings
- Marketing, Sales, and Services: 358 annual job openings
- Manufacturing and Product Development: 292 annual job openings
- Transportation: 214 annual job openings
- Health Science and Medical Technology: 122 annual job openings
- Business and Finance Sector: 82 annual job openings
- Energy, Environment, and Utilities: 74 annual job openings
- Information and Communications Technologies: 52 annual job openings
- Education, Child Development, and Family Services: 44 annual job openings
- Hospitality, Tourism, and Recreation: 23 annual job openings

Recommendations

There are multiple employment opportunities in the College of the Desert area with CE training requirements not currently addressed by career education programs. Furthermore, the college may choose to expand existing program offerings related to several sectors to address the projected need for more workers in the area and the region in the next five years. Examples of pathways that warrant further exploration to determine if it is appropriate for the college to create new programs or expand existing ones include building and construction; marketing, sales, and services; transportation; and health science and medical technology. 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 occupations related to these pathways may reveal the potential for program expansion to meet current and future industry needs.

Health care and social services employers in the college area are expected to add 5,438 jobs over the next five years, representing just over 33% of the area's job growth. Middle-skill occupations that lack related program offerings at the college are expected to have 122 annual job openings, presenting an opportunity to create new or expand existing health care programs. However, the cost of starting and operating health care programs is considerably high. A cost-benefit analysis of programs not currently in existence at the college and the occupations those programs would lead into is one strategy for the college to determine the feasibility of creating new program offerings.

Training related to the building and construction sector is another area the college may want to develop further. Construction industry employers are highly concentrated in the college area and are expected to add 1,431 jobs (10.5% growth) over the next five years. Occupations in-demand and that offer a high-wage in the college area include: carpenters (291 annual job openings, \$22.93 median hourly wage), electricians (129 annual job openings, \$24.28 median), and plumbers, pipefitters, and steamfitters (100 annual job openings, \$24.48 median). The college and the trade unions associated with these occupations may consider developing a training partnership.

Within the marketing, sales, and services sector there are a number of promising occupations with a substantial number of projected annual openings in the college area and the region. The college may want to consider developing a marketing and sales program to meet the demand for the following occupations in the college area:

- Sales representatives, services, all other (164 annual job openings)
- Sales representatives, wholesale and manufacturing, except technical and scientific products (95 annual job openings)
- First-line supervisors of non-retail sales workers (36 annual job openings)

Accommodations and food services, and retail trade employers are also highly concentrated in the college area. The COVID-19 pandemic severely impacted employment and there have been numerous business closures in these sectors. Many of these businesses cut employment due to mandated restrictions designed to protect communities, but the extent of these cuts is not yet known in the college area. Please consult the Inland Empire/Desert Region Center of Excellence for the latest information on businesses affected by the COVID-19 pandemic.

Within the manufacturing and product development sector, the college may want to consider training for maintenance and repair workers, general, an occupation projected to have 215 annual job openings in the college area and 1,684 annual job openings in the region. In addition, within the transportation sector, an occupation to consider providing training for is heavy and tractor-trailer truck drivers which is expected to offer 171 annual job openings in the college area and 4,395 annual job openings in the region.

Finally, while the numbers of occupations and job openings in the college area may appear 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 college area to seek work. The college could market regional job opportunities for students. Some points to consider for opportunities outside the immediate vicinity are:

1. College of the Desert 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. College of the Desert may choose to identify employers whose businesses are in close proximity to its campus and determine those employers' near-term needs for middle-skill workers.

APPENDIX A: COLLEGE OF THE DESERT AREA

26 ZIP codes were employed for this analysis may not perfectly follow College of the Desert's established boundaries for its service area. The area as defined by ZIP codes used for this study should, however, fully capture the majority of the college's student population and employment opportunities. All data is derived from Emsi 2020.2.

Exhibit A1: Population and occupation job counts for ZIP codes in the College of the Desert area

ZIP	City/Community	2019 Population	2019 Jobs	Middle-skill Job Count
92201	Indio	63,755	18,953	6,914
92202	Indio	3,999	417	185
92203	Indio	35,062	7,055	2,446
92210	Indian Wells	6,454	4,581	1,211
92211	Palm Desert	26,724	17,088	5,521
92239	Desert Center	157	61	24
92234	Cathedral City	54,727	10,725	3,912
92235	Cathedral City	1,434	273	81
92236	Coachella	43,142	11,345	3,405
92240	Desert Hot Springs	35,773	4,450	1,653
92241	Desert Hot Springs	8,418	585	264
92247	La Quinta	1,698	36	14
92248	La Quinta	2,598	91	41
92253	La Quinta	36,555	18,062	5,714
92254	Mecca	10,996	896	362
92255	Palm Desert	2,352	252	82
92258	North Palm Springs	302	1,077	638
92260	Palm Desert	29,540	30,250	9,244
92261	Palm Desert	2,307	192	59
92262	Palm Springs	28,042	24,360	9,580
92263	Palm Springs	2,577	399	134
92264	Palm Springs	19,226	8,585	2,870
92270	Rancho Mirage	19,425	14,460	5,253
92274	Thermal (Partially in Imperial County)	9,574	7,697	2,151
92276	Thousand Palms	8,077	5,292	1,853
92282	Whitewater	1,582	136	49
TOTALS		454,496	187,317	63,662

Source: Emsi 20.2

APPENDIX B: DEMOGRAPHIC COMPOSITION REFERENCE

Exhibit B1: Gender by area

Gender	College Area (Percentage)	Region (Percentage)
Male	50.6%	49.8%
Female	49.4%	50.2%

Source: Emsi 20.2

Exhibit B3: Age by area

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

Source: Emsi 20.2

Exhibit B4: Unemployment rate by community

City/Community	Annual Average 2019	October 2020	November 2020	December 2020
Cathedral City	3.8%	9.0%	7.5%	9.6%
Coachella	10.1%	14.9%	13.7%	15.2%
Desert Hot Springs	5.6%	14.1%	12.6%	14.1%
Indian Wells	3.5%	7.2%	6.5%	7.6%
Indio	5.3%	10.1%	8.6%	10.3%
La Quinta	4.1%	8.1%	6.7%	8.4%
Mecca CDP	4.6%	9.4%	8.5%	9.8%
Palm Desert	4.2%	8.2%	7.0%	8.7%
Palm Springs	3.8%	8.1%	6.9%	9.0%
Rancho Mirage	3.2%	6.6%	5.9%	6.9%
Thousand Palms CDP	2.9%	6.0%	5.4%	6.3%

Source: California Employment Development Department, Labor Market Information Division



APPENDIX C: INDUSTRY AND LOCATION QUOTIENT DEFINITIONS, AND SECTORS WITH FEWER THAN 10,000 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, College of the Desert employs faculty, but the institution also hires a variety of administrators and support staff to maintain its operations. The same is true for business establishments in 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.

The 10 major industry sectors below each have fewer than 5,000 jobs and collectively represent about 12.3% of jobs in the college area. The 2019 job count and projected five-year job growth for each industry are:

- **Real Estate and Rental and Leasing**, 4,785 jobs in 2019, addition of 251 jobs by 2024
- **Transportation and Warehousing**, 3,675 jobs in 2019, addition of 440 jobs by 2024
- **Manufacturing**, 3,576 jobs in 2019, addition of 222 jobs by 2024
- **Wholesale Trade**, 3,221 jobs in 2019, addition of 105 jobs by 2024
- **Finance and Insurance**, 2,676 jobs in 2019, addition of 49 jobs by 2024
- **Educational Services**, 2,007 jobs in 2019, addition of 233 jobs by 2024
- **Information**, 2,110 jobs in 2019, addition of 22 jobs by 2024
- **Utilities**, 827 jobs in 2019, addition of 50 jobs by 2024
- **Management of Companies and Enterprises**, 110 jobs in 2019, addition of 2 jobs by 2024
- **Mining, Quarrying, and Oil and Gas Extraction**, 87 jobs in 2019, addition of 3 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 of 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 must 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

Occupation	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	99	934	\$25.84	\$33.75	\$42.91	Both
Administrative Services Managers	Middle-skill	24	259	\$34.42	\$47.33	\$62.97	Both
Advertising and Promotions Managers	Higher-skill	2	14	\$22.15	\$44.58	\$70.04	Both
Agricultural and Food Science Technicians	Middle-skill	6	36	\$16.49	\$21.36	\$26.44	In-demand
Appraisers and Assessors of Real Estate	Middle-skill	10	64	\$21.36	\$28.30	\$42.48	Both
Architects, Except Landscape and Naval	Higher-skill	12	102	\$25.70	\$35.82	\$53.67	Both

Continued

Occupation	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	12	123	\$20.13	\$27.44	\$36.01	Both
Architectural and Engineering Managers	Higher-skill	6	101	\$55.58	\$70.20	\$83.70	Both
Art Directors	Higher-skill	16	100	\$9.39	\$24.62	\$42.06	Both
Audio and Video Equipment Technicians	Middle-skill	11	87	\$14.23	\$18.65	\$28.93	Both
Automotive Body and Related Repairers	Middle-skill	17	167	\$13.27	\$18.48	\$28.57	Both
Automotive Service Technicians and Mechanics	Middle-skill	115	1,217	\$14.31	\$19.51	\$27.00	In-demand
Bill and Account Collectors	Middle-skill	22	261	\$15.95	\$18.60	\$23.30	In-demand
Bookkeeping, Accounting, and Auditing Clerks	Middle-skill	218	2,079	\$15.76	\$19.60	\$25.17	Both
Brickmasons and Blockmasons	Middle-skill	11	120	\$17.17	\$24.57	\$29.75	Both
Budget Analysts	Higher-skill	3	37	\$22.48	\$33.17	\$43.91	Both
Bus and Truck Mechanics and Diesel Engine Specialists	Middle-skill	29	483	\$18.32	\$24.05	\$30.33	Both
Career/Technical Education Teachers, Secondary School	Higher-skill	7	79	\$35.07	\$39.70	\$45.29	Both
Cargo and Freight Agents	Middle-skill	3	123	\$19.10	\$23.15	\$30.07	Both
Carpenters	Middle-skill	291	2,591	\$16.61	\$22.93	\$29.57	Both
Chefs and Head Cooks	Middle-skill	52	252	\$14.00	\$20.24	\$32.18	Both
Chief Executives	Higher-skill	21	204	\$40.59	\$78.12	\$118.61	Both
Child, Family, and School Social Workers	Higher-skill	25	234	\$20.13	\$25.85	\$33.33	Both
Childcare Workers	Middle-skill	214	2,008	\$9.71	\$12.04	\$15.76	In-demand
Civil Engineers	Higher-skill	20	285	\$40.81	\$52.01	\$63.56	Both
Clinical Laboratory Technologists and Technicians	Middle-skill	25	194	\$19.21	\$24.72	\$35.08	Both
Coaches and Scouts	Higher-skill	48	368	\$12.12	\$17.25	\$28.20	In-demand
Community and Social Service Specialists, All Other	Higher-skill	19	165	\$13.81	\$23.93	\$31.70	Both
Community Health Workers	Middle-skill	9	82	\$19.16	\$23.48	\$30.30	Both
Compensation, Benefits, and Job Analysis Specialists	Middle-skill	4	50	\$26.35	\$32.85	\$42.81	Both
Computer and Information Systems Managers	Higher-skill	11	152	\$52.52	\$68.15	\$82.80	Both
Computer Network Support Specialists	Middle-skill	8	108	\$22.76	\$28.00	\$37.23	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Computer Systems Analysts	Higher-skill	12	186	\$31.78	\$39.87	\$50.65	Both
Computer User Support Specialists	Middle-skill	28	390	\$19.54	\$26.11	\$34.08	Both
Construction and Building Inspectors	Middle-skill	17	164	\$31.27	\$40.80	\$53.80	Both
Construction Managers	Middle-skill	50	482	\$23.37	\$32.46	\$51.52	Both
Correctional Officers and Jailers	Middle-skill	43	463	\$29.37	\$38.33	\$43.30	Both
Customer Service Representatives	Middle-skill	234	2,658	\$13.88	\$17.44	\$22.85	In-demand
Data Entry Keyers	Middle-skill	16	199	\$13.15	\$15.26	\$17.75	In-demand
Database Administrators	Higher-skill	4	49	\$33.88	\$46.72	\$61.31	Both
Dental Hygienists	Middle-skill	18	186	\$40.54	\$45.41	\$50.58	Both
Detectives and Criminal Investigators	Middle-skill	7	85	\$45.11	\$49.12	\$58.20	Both
Dietetic Technicians	Middle-skill	5	47	\$11.81	\$15.27	\$19.20	In-demand
Dietitians and Nutritionists	Higher-skill	8	85	\$28.59	\$34.97	\$40.58	Both
Drafters, All Other	Middle-skill	2	21	\$16.74	\$20.09	\$32.48	Both
Education Administrators, All Other	Higher-skill	7	86	\$34.87	\$52.01	\$69.54	Both
Education Administrators, Preschool and Childcare Center/Program	Higher-skill	6	55	\$14.88	\$18.27	\$30.89	Both
Education, Training, and Library Workers, All Other	Higher-skill	15	217	\$13.79	\$18.94	\$25.11	Both
Electrical and Electronics Engineering Technicians	Middle-skill	6	107	\$22.49	\$29.45	\$38.39	Both
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	Middle-skill	4	23	\$32.18	\$43.98	\$55.83	High-wage
Electrical Power-Line Installers and Repairers	Middle-skill	11	148	\$25.84	\$35.93	\$54.40	Both
Electricians	Middle-skill	129	1,365	\$18.07	\$24.28	\$32.53	Both
Elementary School Teachers, Except Special Education	Higher-skill	183	1,962	\$33.13	\$42.88	\$48.90	Both
Emergency Medical Technicians and Paramedics	Middle-skill	22	280	\$12.10	\$15.49	\$20.02	In-demand
Environmental Scientists and Specialists, Including Health	Higher-skill	7	80	\$31.74	\$41.13	\$52.07	Both
Executive Secretaries and Executive Administrative Assistants	Middle-skill	38	397	\$23.06	\$28.13	\$34.25	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Farmers, Ranchers, and Other Agricultural Managers	Middle-skill	110	230	\$16.19	\$21.41	\$51.02	Both
Film and Video Editors	Middle-skill	3	25	\$20.18	\$40.40	\$54.56	Both
Financial Managers	Higher-skill	41	421	\$36.52	\$53.14	\$72.74	Both
Firefighters	Middle-skill	26	269	\$25.92	\$30.40	\$37.87	Both
First-Line Supervisors of Construction Trades and Extraction Workers	Middle-skill	96	1,000	\$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	35	79	\$16.06	\$22.73	\$30.11	In-demand
First-Line Supervisors of Food Preparation and Serving Workers	Middle-skill	240	1,908	\$13.03	\$14.94	\$18.63	In-demand
First-Line Supervisors of Gaming Workers	Middle-skill	17	146	\$20.78	\$27.77	\$33.45	Both
First-Line Supervisors of Housekeeping and Janitorial Workers	Middle-skill	50	271	\$14.14	\$19.80	\$28.37	In-demand
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Middle-skill	73	267	\$15.42	\$22.64	\$32.54	Both
First-Line Supervisors of Non-Retail Sales Workers	Middle-skill	36	402	\$15.25	\$24.90	\$37.23	Both
First-Line Supervisors of Office and Administrative Support Workers	Middle-skill	175	1,750	\$20.78	\$26.41	\$33.50	Both
First-Line Supervisors of Production and Operating Workers	Middle-skill	37	589	\$21.56	\$28.35	\$38.26	Both
First-Line Supervisors of Protective Service Workers, All Other	Middle-skill	19	154	\$13.49	\$18.18	\$28.43	Both
Fish and Game Wardens	Middle-skill	-	4	\$14.95	\$16.56	\$18.16	High-wage
Fitness Trainers and Aerobics Instructors	Middle-skill	84	695	\$11.80	\$18.92	\$27.03	Both
Food Service Managers	Middle-skill	93	653	\$15.83	\$20.87	\$29.15	Both
Forensic Science Technicians	Middle-skill	5	45	\$30.18	\$35.39	\$42.10	Both
Forest and Conservation Technicians	Middle-skill	4	79	\$17.01	\$19.51	\$25.97	In-demand
General and Operations Managers	Higher-skill	222	2,162	\$31.34	\$48.54	\$69.84	Both
Glaziers	Middle-skill	15	125	\$17.08	\$29.05	\$55.40	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Graphic Designers	Middle-skill	33	255	\$16.44	\$20.71	\$29.83	Both
Health Educators	Higher-skill	7	72	\$26.41	\$40.78	\$46.24	Both
Healthcare Support Workers, All Other	Middle-skill	20	208	\$18.22	\$21.26	\$24.08	In-demand
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Middle-skill	58	572	\$16.33	\$19.96	\$26.93	Both
Heavy and Tractor-Trailer Truck Drivers	Middle-skill	171	4,395	\$16.43	\$21.57	\$28.71	Both
Human Resources Assistants, Except Payroll and Timekeeping	Middle-skill	15	182	\$16.54	\$19.65	\$23.59	In-demand
Human Resources Managers	Higher-skill	12	152	\$41.68	\$54.47	\$69.44	Both
Human Resources Specialists	Higher-skill	48	607	\$24.36	\$29.60	\$37.34	Both
Industrial Engineers	Higher-skill	4	119	\$29.74	\$38.44	\$48.97	Both
Industrial Machinery Mechanics	Middle-skill	18	301	\$22.40	\$27.95	\$33.68	Both
Industrial Production Managers	Middle-skill	7	132	\$36.09	\$47.52	\$62.53	Both
Kindergarten Teachers, Except Special Education	Higher-skill	14	144	\$24.89	\$34.17	\$38.76	Both
Labor Relations Specialists	Higher-skill	4	57	\$24.57	\$31.26	\$43.59	Both
Legal Secretaries	Middle-skill	17	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	84	809	\$20.90	\$25.10	\$29.89	Both
Loan Officers	Higher-skill	21	224	\$14.26	\$26.98	\$44.08	Both
Lodging Managers	Middle-skill	25	53	\$18.59	\$35.65	\$56.40	Both
Maintenance and Repair Workers, General	Middle-skill	215	1,684	\$14.89	\$19.84	\$26.30	In-demand
Management Analysts	Higher-skill	60	679	\$26.81	\$37.83	\$53.36	Both
Managers, All Other	Higher-skill	93	920	\$17.06	\$34.61	\$57.22	Both
Market Research Analysts and Marketing Specialists	Higher-skill	59	591	\$18.54	\$26.18	\$36.30	Both
Marketing Managers	Higher-skill	12	130	\$35.55	\$48.04	\$70.92	Both
Mechanical Engineers	Higher-skill	5	123	\$32.57	\$40.53	\$50.53	Both
Medical and Health Services Managers	Higher-skill	38	401	\$43.12	\$56.33	\$70.83	Both
Medical Assistants	Middle-skill	135	1,287	\$13.13	\$15.23	\$17.83	In-demand
Medical Records and Health Information Technicians	Middle-skill	17	184	\$17.09	\$22.44	\$36.36	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Medical Secretaries	Middle-skill	113	1,095	\$14.09	\$17.40	\$21.49	In-demand
Meeting, Convention, and Event Planners	Higher-skill	23	125	\$17.25	\$22.96	\$33.04	Both
Middle School Teachers, Except Special and Career/Technical Education	Higher-skill	35	352	\$31.64	\$39.99	\$45.96	Both
Mobile Heavy Equipment Mechanics, Except Engines	Middle-skill	18	240	\$24.21	\$30.12	\$35.78	Both
Music Directors and Composers	Higher-skill	7	85	\$13.94	\$22.59	\$37.82	Both
Network and Computer Systems Administrators	Middle-skill	12	158	\$30.39	\$38.48	\$50.43	Both
Nursing Assistants	Middle-skill	146	1,311	\$13.07	\$15.62	\$18.45	In-demand
Occupational Therapy Assistants	Middle-skill	6	54	\$30.06	\$34.50	\$38.21	Both
Operating Engineers and Other Construction Equipment Operators	Middle-skill	46	554	\$26.92	\$38.15	\$45.18	Both
Paralegals and Legal Assistants	Middle-skill	28	262	\$22.27	\$27.46	\$35.00	Both
Payroll and Timekeeping Clerks	Middle-skill	22	238	\$18.83	\$22.56	\$26.50	Both
Personal Financial Advisors	Higher-skill	20	122	\$25.86	\$36.52	\$87.10	Both
Pesticide Handlers, Sprayers, and Applicators, Vegetation	Middle-skill	6	23	\$11.79	\$16.20	\$23.30	In-demand
Photographers	Middle-skill	13	146	\$12.18	\$20.05	\$36.36	Both
Physical Therapist Assistants	Middle-skill	11	103	\$30.72	\$34.61	\$38.13	Both
Plumbers, Pipefitters, and Steamfitters	Middle-skill	100	983	\$16.81	\$24.48	\$30.10	Both
Police and Sheriff's Patrol Officers	Middle-skill	59	628	\$36.88	\$47.03	\$57.47	Both
Power Distributors and Dispatchers	Middle-skill	2	12	\$39.52	\$45.92	\$55.49	High-wage
Power Plant Operators	Middle-skill	8	28	\$34.64	\$41.58	\$48.96	Both
Preschool Teachers, Except Special Education	Middle-skill	42	413	\$12.55	\$14.36	\$17.65	In-demand
Probation Officers and Correctional Treatment Specialists	Higher-skill	12	125	\$32.78	\$38.66	\$50.79	Both
Producers and Directors	Middle-skill	11	58	\$16.10	\$30.34	\$44.51	Both
Production, Planning, and Expediting Clerks	Middle-skill	31	537	\$17.76	\$22.06	\$27.74	Both
Public Relations Specialists	Higher-skill	26	177	\$21.09	\$29.25	\$40.28	Both
Radiologic Technologists	Middle-skill	15	140	\$30.62	\$36.03	\$41.78	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Real Estate Brokers	Middle-skill	30	168	\$18.25	\$37.66	\$56.98	Both
Real Estate Sales Agents	Middle-skill	86	476	\$15.97	\$26.42	\$44.61	Both
Recreation Workers	Middle-skill	99	745	\$11.50	\$12.61	\$14.74	In-demand
Recreational Vehicle Service Technicians	Middle-skill	4	52	\$15.76	\$19.45	\$24.90	In-demand
Registered Nurses	Middle-skill	255	2,616	\$38.82	\$47.45	\$58.41	Both
Respiratory Therapists	Middle-skill	16	150	\$29.33	\$35.39	\$41.59	Both
Sales Managers	Higher-skill	51	559	\$27.32	\$43.00	\$71.18	Both
Sales Representatives, Services, All Other	Middle-skill	164	1,437	\$14.82	\$22.92	\$33.68	Both
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Middle-skill	95	1,777	\$18.91	\$27.77	\$39.03	Both
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Higher-skill	12	169	\$24.30	\$34.64	\$52.10	Both
Secondary School Teachers, Except Special and Career/ Technical Education	Higher-skill	98	1,034	\$31.61	\$40.49	\$47.02	Both
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	Middle-skill	270	2,760	\$14.16	\$18.58	\$23.76	In-demand
Sheet Metal Workers	Middle-skill	22	261	\$17.17	\$24.15	\$30.67	Both
Social and Community Service Managers	Higher-skill	34	249	\$18.91	\$30.62	\$49.47	Both
Social and Human Service Assistants	Middle-skill	90	713	\$14.94	\$17.90	\$23.68	In-demand
Social Workers, All Other	Higher-skill	27	263	\$27.08	\$33.84	\$41.17	Both
Software Developers, Applications	Higher-skill	16	237	\$38.82	\$48.70	\$60.83	Both
Software Developers, Systems Software	Higher-skill	7	118	\$37.41	\$48.83	\$62.03	Both
Soil and Plant Scientists	Higher-skill	2	18	\$24.54	\$29.81	\$51.68	Both
Solar Photovoltaic Installers	Middle-skill	5	52	\$16.80	\$19.15	\$25.83	Both
Special Education Teachers, Kindergarten and Elementary School	Higher-skill	19	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	5	51	\$11.00	\$12.07	\$18.09	Neither

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Special Education Teachers, Secondary School	Higher-skill	11	114	\$37.33	\$43.18	\$47.84	Both
Structural Iron and Steel Workers	Middle-skill	25	237	\$21.97	\$32.33	\$39.40	Both
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Higher-skill	64	532	\$17.20	\$21.24	\$26.94	Both
Substitute Teachers	Higher-skill	158	1,788	\$16.37	\$18.05	\$21.09	In-demand
Surgical Technologists	Middle-skill	11	135	\$22.87	\$27.39	\$32.60	Both
Tax Preparers	Middle-skill	16	123	\$11.75	\$16.73	\$31.80	Both
Teacher Assistants	Middle-skill	224	2,469	\$13.79	\$16.84	\$19.75	In-demand
Teachers and Instructors, All Other	Higher-skill	46	615	\$12.71	\$16.79	\$26.42	In-demand
Telecommunications Equipment Installers and Repairers, Except Line Installers	Middle-skill	45	403	\$22.21	\$26.71	\$30.13	Both
Telecommunications Line Installers and Repairers	Middle-skill	15	179	\$17.20	\$25.59	\$35.66	Both
Transportation, Storage, and Distribution Managers	Middle-skill	9	279	\$32.81	\$41.71	\$54.09	Both
Water and Wastewater Treatment Plant and System Operators	Middle-skill	14	146	\$26.25	\$32.87	\$40.77	Both
Web Developers	Middle-skill	9	109	\$16.52	\$24.36	\$36.27	Both

Source: COE, Emsi 20.2

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

Exhibit E1: Crosswalk linking CDE to CCCCCO 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



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