

JANUARY 2021

CRAFTON HILLS COLLEGE LOCAL WORKFORCE DEMAND ASSESSMENT



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

Strong Workforce Data Analytics
and Alignment Project



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

TABLE OF CONTENTS

Introduction.....	3
Methodology.....	4
Demographic Composition	5
Industry Employment and Business Activity.....	10
Occupational Employment in the Crafton Hills College Area.....	12
Crafton Hills College Program Offerings by Career Education Industry Sector	13
Arts, Media, and Entertainment Industry Sector	14
Business and Finance Sector	15
Education, Child Development, and Family Services Sector	17
Health Science and Medical Technology Sector.....	19
Hospitality, Tourism, and Recreation Industry Sector	21
Information and Communications Technologies Sector	22
Marketing, Sales, and Services Sector.....	24
Public Services Sector	26
Additional Career Education Sectors and Jobs	28
Key Findings and Recommendations	32
Appendix A: Crafton Hills College Area.....	34
Appendix B: Demographic Composition Reference	35
Appendix C: Industry and Location Quotient Definitions, and Sectors with Fewer than 2,000 Jobs	37
Appendix D: Occupation and Skills Definitions, and Reference Table with Occupational Demand and Wage	38
Appendix E: CDE-to-CCCCO-Priority-Sector Crosswalk	46
Appendix F: Reference Cited and Resources	48

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.

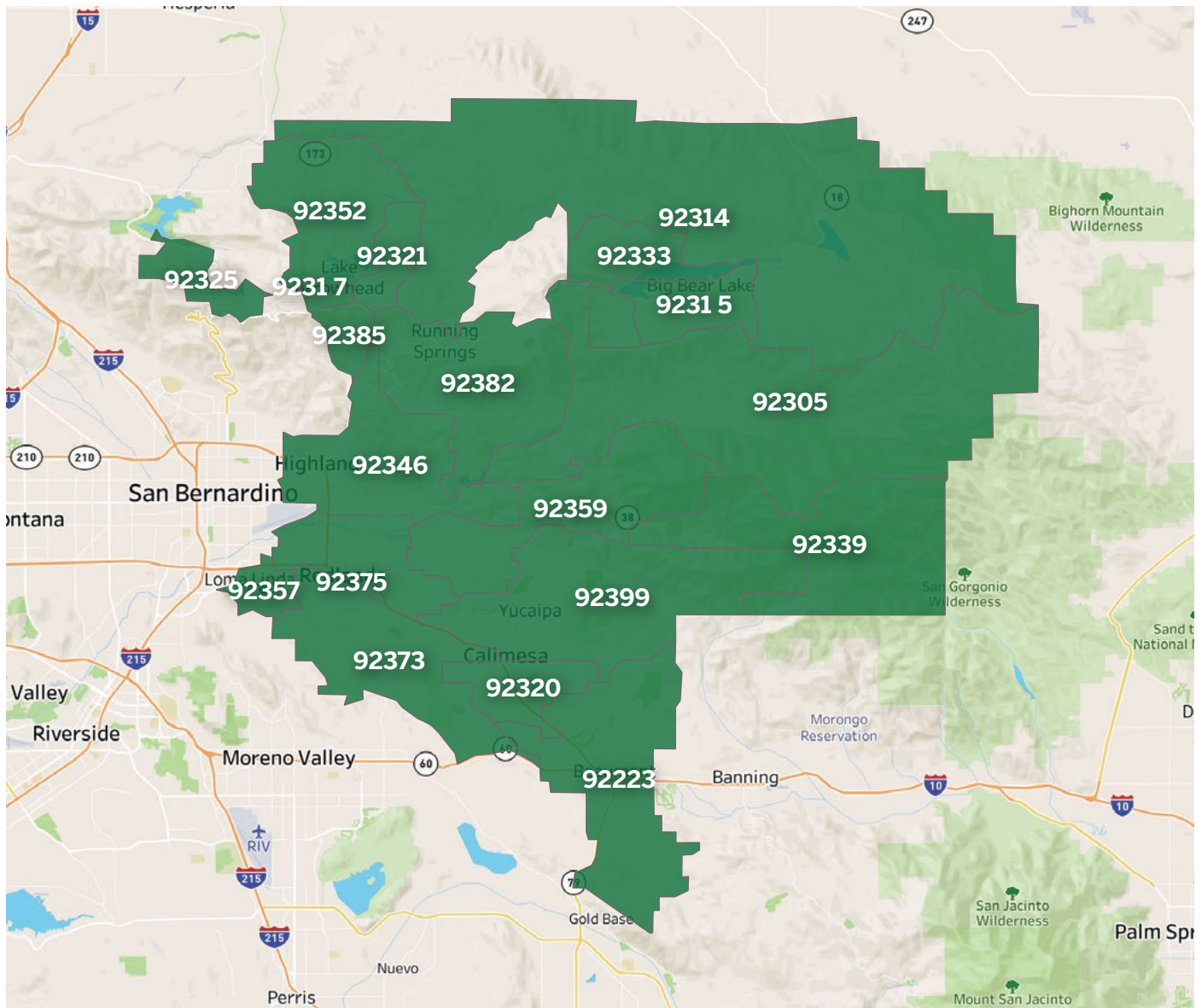
INTRODUCTION

Situated in the Inland Empire subregion of the Inland Empire/Desert Region, Crafton Hills College serves the cities and communities of Angelus Oaks, Beaumont, Big Bear City, Big Bear Lake, Blue Jay, Calimesa, Cedar Glen, Crestline, Fawnskin, Forest Falls, Highland, Lake Arrowhead, Loma Linda, Mentone, Redlands, Running Springs, Skyforest, and Yucaipa (Exhibit 1). Crafton Hills College is part of the San Bernardino Community College District, along with San Bernardino Valley College.

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 close partnership with Crafton Hills College's research staff, seeks to illuminate the job opportunities available to students within the area served by Crafton Hills College and determine to what extent the college is meeting local employer demand. Furthermore, this analysis identifies opportunities for the college to create new training programs for in-demand occupations for which no training programs currently exist.

Exhibit 1: Area served by Crafton Hills College



Source: Emsi, Tableau

METHODOLOGY

The analysis in this local workforce demand assessment reviews Crafton Hills College's area population, industries, and community college programs aligned to an occupational crosswalk. The area examined in this report may not perfectly align with 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. Crafton Hills College's program offerings are organized by the California Department of Education (CDE) industry sectors. A CDE-to-Taxonomy-of-Programs (TOP) crosswalk, validated by the California Community Colleges Chancellor's Office, was used to link CDE sectors to Crafton Hills College's TOP code offerings. Linking Crafton Hills College'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 insights into employment opportunities for community college students who transfer to four-year postsecondary institutions.

The annual job openings figures 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 the crosswalk linking CDE sectors with CCCCCO sectors defined by the Chancellor's Office.



DEMOGRAPHIC COMPOSITION

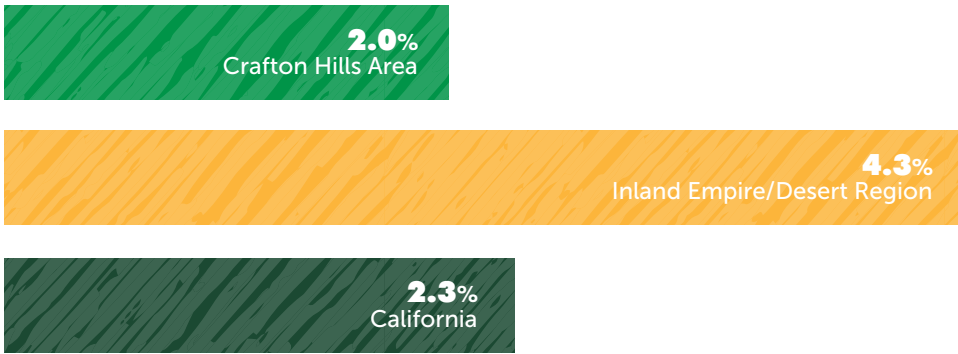
This section analyzes the demographic characteristics of the Crafton Hills College area, including population count, gender, race/ethnicity, age, and educational attainment. Understanding the local area’s composition is essential to ensure the college is serving its population and undertaking appropriate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

Resident Population

The Crafton Hills College area contains 329,324 residents or approximately 7% of the Inland Empire/Desert Region’s population, 4,672,608 total residents. The largest city in the college area is Redlands, which is the 124th largest city in California, with an estimated 70,700 residents in 2019. Yucaipa had 55,629 residents in 2019, according to the California Department of Finance.

Over the five-year period between 2019 and 2024, the area’s population is projected to increase by 2%, adding 6,551 additional residents (Exhibit 2). Local growth is slower than that of the region overall, which is projected to increase by 4.3% during the same five-year timeframe.

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

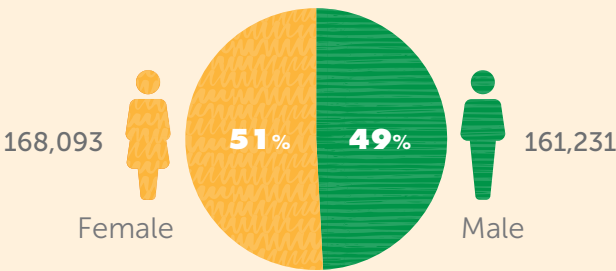


Source: Emsi 20.2

Resident Gender

The Crafton Hills College area has slightly more female residents than male residents, with women representing 51% of the population and men representing 49% (Exhibit 3). The Crafton Hills area has slightly more female residents compared to the Inland Empire/Desert region as a whole. Gender figures for the Inland Empire/Desert Region are available in Appendix B.

Exhibit 3: 2019 gender population share, Crafton Hills College area

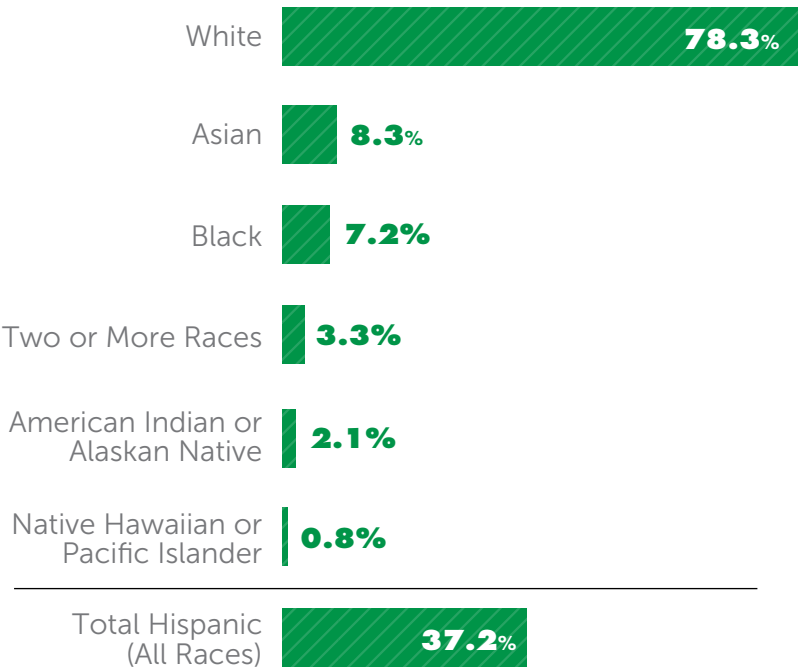


Source: Emsi 20.2

Race and Ethnicity

White residents make up about 78% of residents in the college area, the same share as the Inland Empire/Desert Region as a whole (Exhibit 4). Asian residents comprise 8% of the college area population, compared to 7% in the region. There is a slightly smaller share of Black residents in the college area, 7% versus 8% in the region. The Crafton Hills College area has a smaller proportion of Hispanic residents, 37%, compared to 52% in the region. Appendix B shows detailed demographic data for the college area and region.

Exhibit 4: 2019 Race and Hispanic population share, Crafton Hills College area



Source: Emsi 20.2



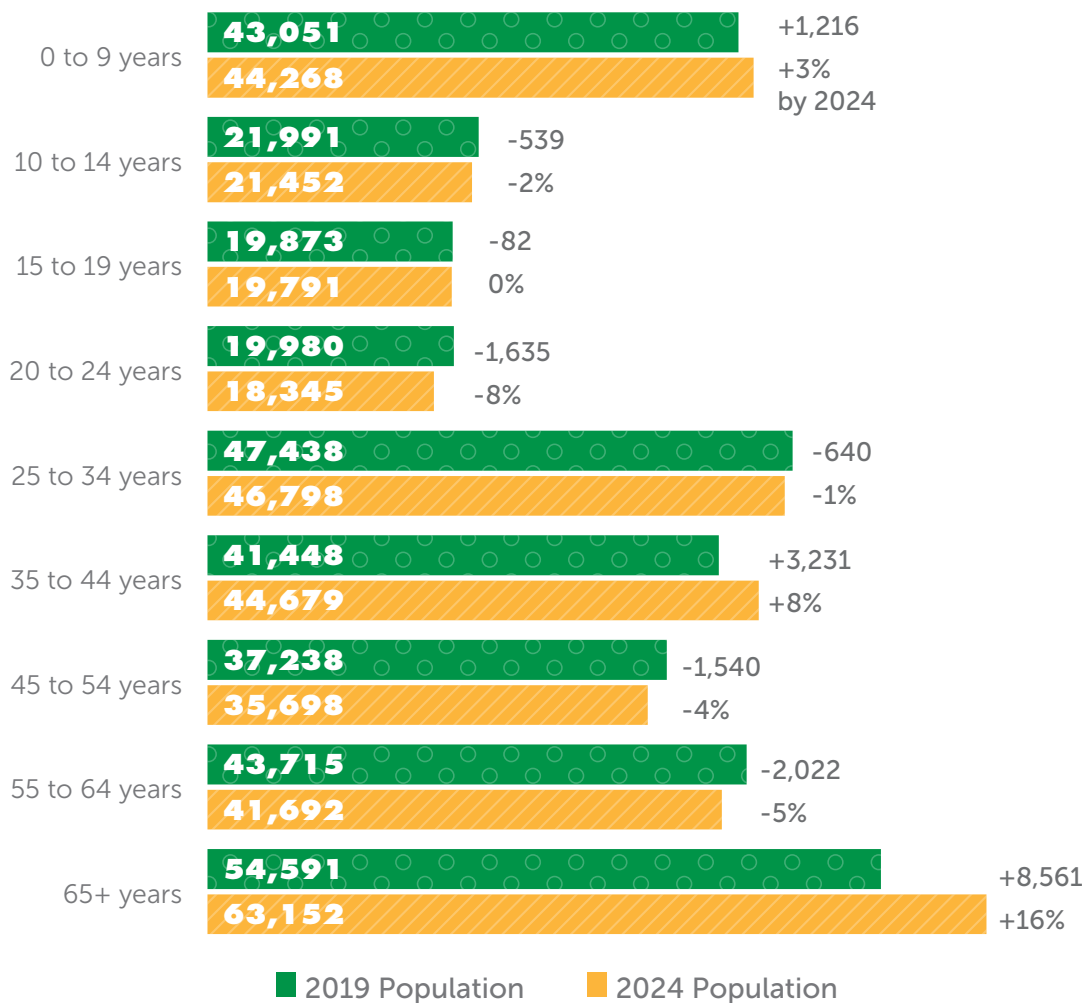
Age

Information on the age of residents helps indicate future enrollment needs in the Crafton Hills College area. In 2019, residents age 9 years or younger represented about 13% of the area's population. This group is expected to increase by 3% by 2024, faster than the overall population, which has a projected growth rate of 2% (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 decline by 2% over the next five years. The 15-to-19-year-old age group, representing high school students and recent graduates, represents just over 6% of the population and is expected to remain flat through 2024.

The working-age population, ages 25 to 65, represented just over half (51.6%) of the area's population in 2019. Over the next five years, the working-age population is expected to decline by 971 residents, a decrease of 0.6%.

The 65-years-and-older age group represents about 17% of the area's population and is projected to increase by 16% over the next five years, rising by 8,561 residents. Residents age 65 and older represent the fastest growing age group in the Crafton Hills College area indicating a near-term need for services related to an aging population.

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

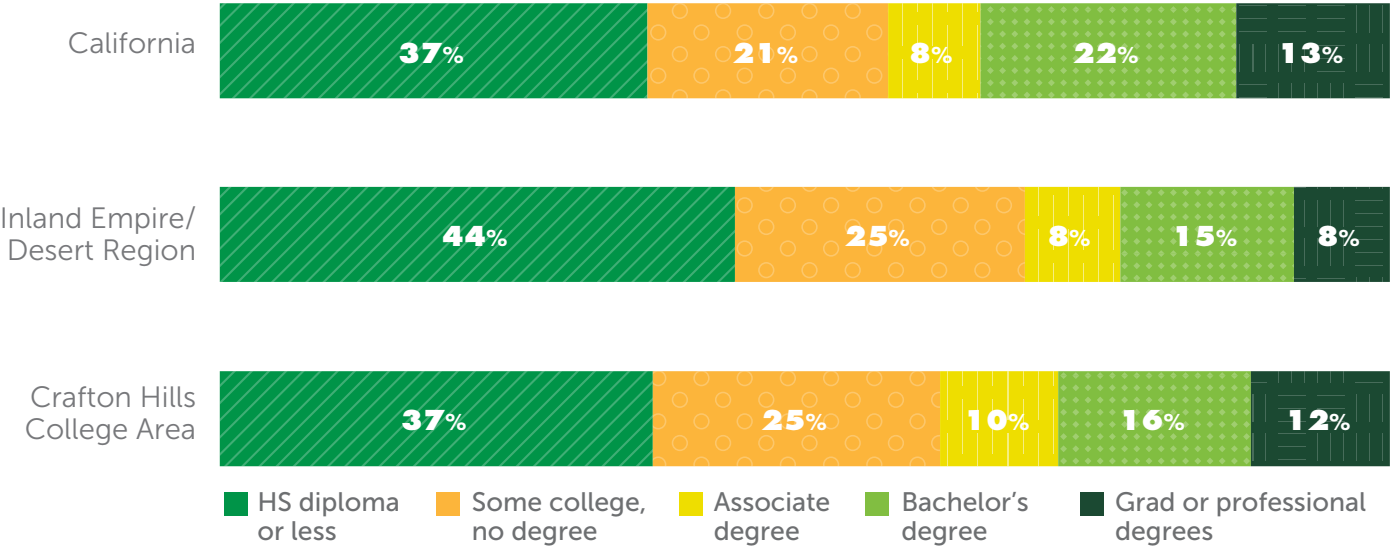


Source: Emsi 20.2

Educational Attainment

Educational attainment refers to the highest level of education that residents age 25 and older have completed. More than a third of the residents (37%) in the Crafton Hills College area have a high school diploma or less, a percentage that is comparable with California (37%), and lower than the region (44%) (Exhibit 6). Within the college area 33% of residents have completed some form of a community college education (35% have completed some college, no degree or an associate degree). This is higher than the region (33%) and the state (29%). The share of residents in the area with a bachelor's degree (16%) is slightly higher than the Inland Empire/Desert Region (15%), and lower than California overall (22%), representing an opportunity to increase educational attainment of bachelor's degrees in the area.

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



Source: American Community Survey

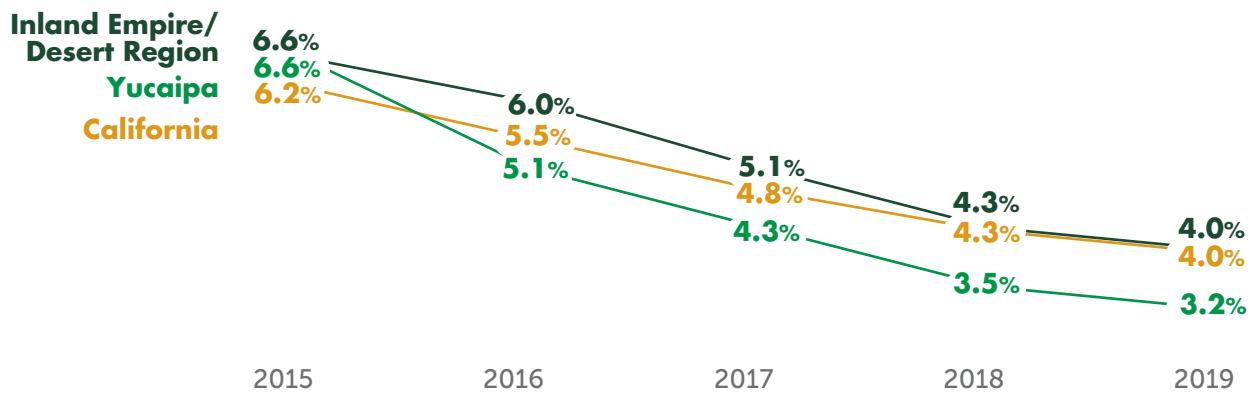


Labor Force and Unemployment Rate

Labor force data reflects the employment status of people by “place of residence.” A person is counted in the labor force by their residence, regardless of where their work is located. Over the last five years, the unemployment rate in Yucaipa city has been historically lower than the region (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 Yucaipa was 6.6%, or 1,600 residents. By 2019, the unemployment rate fell to 3.2%, with the number of unemployed residents dropping to 800.

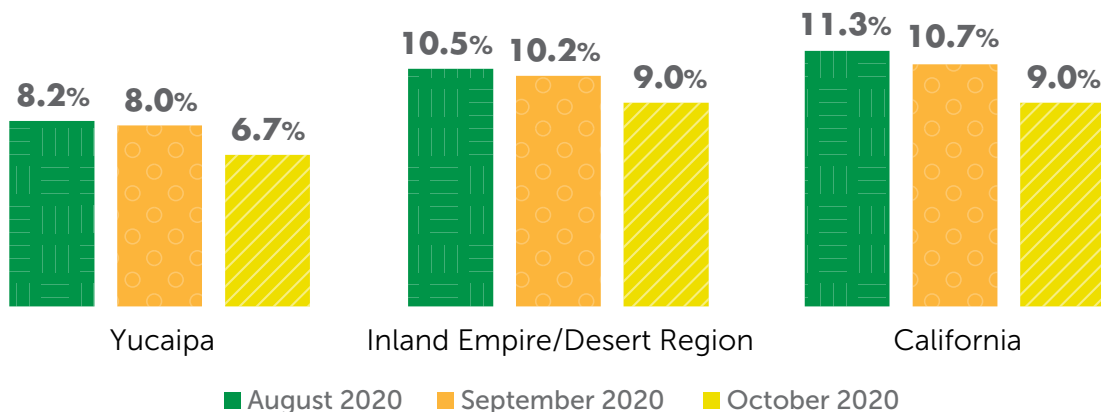
Exhibit 7: Annual average unemployment rate in Yucaipa, Inland Empire/Desert Region, and California (in percent)



Source: California Employment Development Department, Labor Market Information Division

The COVID-19 pandemic and resulting economic shutdown in March 2020 resulted in a dramatic increase in the unemployment rate for most of the region. Exhibit 8 displays the last three months of unemployment rate data for Yucaipa city, the Inland Empire/Desert Region, and California from August 2020 through October 2020.

Exhibit 8: Unemployment rate in Yucaipa, the Inland Empire/Desert Region, and California, August-October 2020



Source: California Employment Development Department, Labor Market Information Division

INDUSTRY EMPLOYMENT AND BUSINESS ACTIVITY

In 2019, there were 127,167 jobs in the Crafton Hills College area, accounting for approximately 7.3% of total regional employment (Exhibit 9). Over the next five years, employment in the Crafton Hills College area is projected to increase by 9%, adding 11,472 jobs. The Crafton Hills College area is projected to grow slightly faster than the region, which has a projected growth rate of 8.4%, and California, 6%.

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

	Crafton Hills College Area	Inland Empire/ Desert Region	California
2019 Jobs	127,167	1,747,341	20,003,848
2024 Jobs	138,638	1,893,522	21,200,103
Jobs Change	11,472	146,181	1,196,255
2019-2024 % Jobs Change	9.0%	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 six major industries with the most jobs accounted for more than two-thirds (69.6%) of total jobs in the college area:

1. Health care and social assistance (29,760 jobs)
2. Government (16,917 jobs)
3. Retail trade (13,566 jobs)
4. Accommodation and food services (11,497 jobs)
5. Administrative and support and waste management and remediation services (8,513 jobs)
6. Construction (8,316 jobs)

Over the next five years, area employers are expected to increase employment by 11,472 jobs, or 9%. The following five major industries are projected to contribute 80.1% of the job growth in the area:

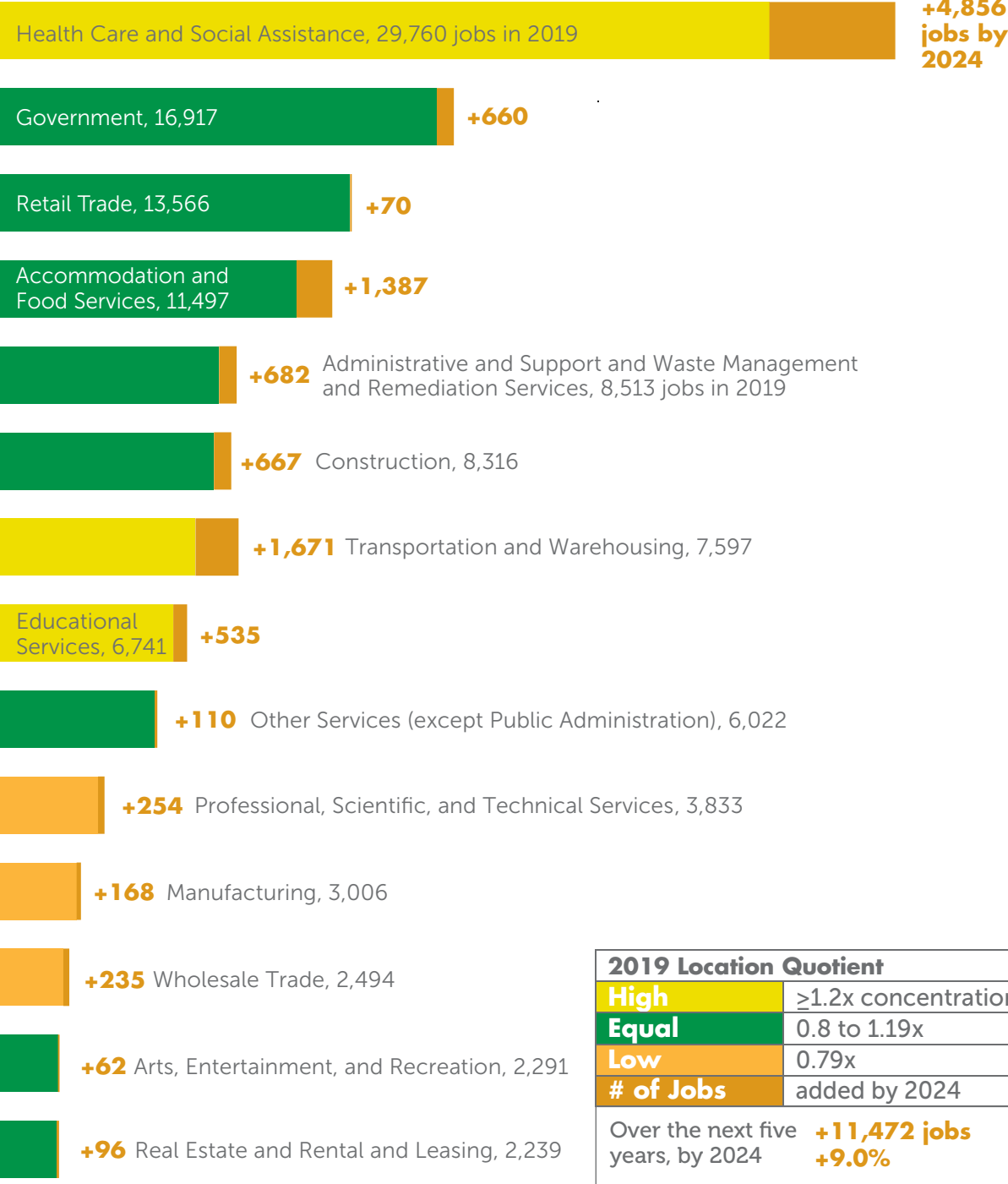
1. Health care and social assistance (4,856 jobs added)
2. Transportation and warehousing (1,671 jobs)
3. Accommodation and food services (1,387 jobs)
4. Administrative and support and waste management and remediation services (682 jobs)
5. Construction (667 jobs)

Exhibit 10 displays the 2019 location quotient for each major industry in the college service area. A location quotient quantifies an industry's concentration in the regional economy compared to the nation. A high location quotient (1.2 or greater) indicates an industry is particularly important to the local economy. Conversely, an industry with a low location quotient (0.79 or less) is less concentrated in the region compared to the nation, indicating that job seekers are more likely to find jobs in this industry 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 (80,254 jobs out of 127,167 total jobs). Major industry groups with fewer than 2,000 jobs, along with key industry terms, are displayed in Appendix C.

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

Industry sector, number of jobs in 2019



Source: Emsi 20.2

OCCUPATIONAL EMPLOYMENT IN THE CRAFTON HILLS COLLEGE AREA

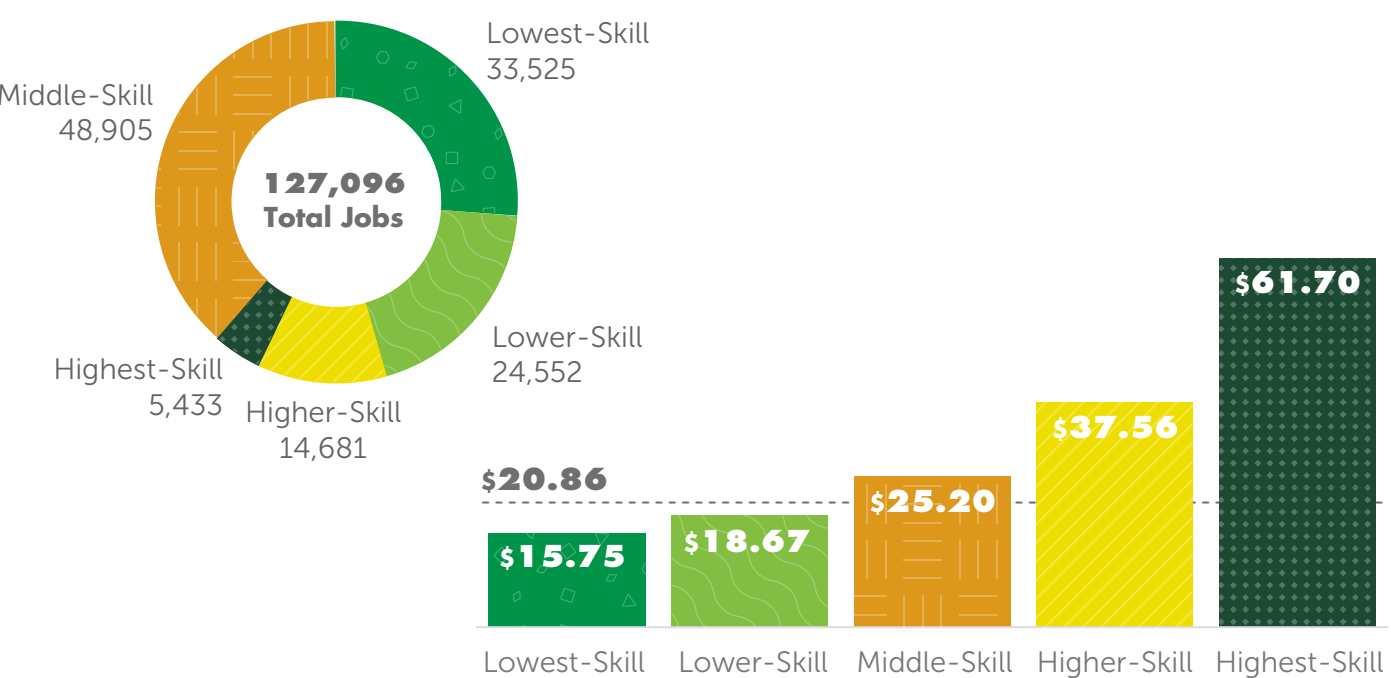
Occupational employment in the Crafton Hills College area was analyzed in terms of skill level. The California Community Colleges provide education and training that generally prepares students to enter middle-skill jobs. Middle-skill occupations typically require educational attainment beyond a high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

For this study, higher-skill jobs are those that require a bachelor’s degree. Focusing on higher-skill jobs demonstrates the types of jobs available to students after completing a transfer program to a four-year postsecondary institution. This assessment does not include occupations that typically require an education beyond a bachelor’s degree, such as physicians, lawyers, and most scientists. Lower-skill and lowest-skill jobs are also excluded from this report. Definitions for each skill level is available in Appendix D. Military-specific occupations in the Crafton Hills College area were removed from further analysis (-73 jobs).

Of the 127,096 jobs in the Crafton Hills College area in 2019, approximately 38% were classified as middle-skill jobs, 26% were lowest-skill, 19% were lower-skill, 12% were higher-skill, and 4% were highest-skill (Exhibit 11). Through 2024, employers expect to have 90,683 job openings to fill newly created positions as well as existing jobs that workers are permanently vacating (due to occupational transfers and retirements). While most of these opportunities will be in lower-skill and lowest skill-level occupations, 5,915 middle-skill openings are expected annually in the Crafton Hills College area through 2024.

Community colleges also should ensure that their training programs lead to occupations with adequate annual job openings and self-sustaining earnings. For this study, an occupation is considered **in-demand** if it has **100 annual job openings** or more over the next five years in the Inland Empire/Desert Region, even if the job openings are lower in the Crafton Hills College area. Occupations are considered **high-wage** if the median hourly wage **meets or exceeds \$20.86 per hour**, the average median hourly wage for all California occupations. Exhibit 11 displays occupations by skill level and average hourly wage for each skill-level category.

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



Source: COE, Emsi 20.2

CRAFTON HILLS COLLEGE PROGRAM OFFERINGS BY CAREER EDUCATION INDUSTRY SECTOR

The California Department of Education (CDE) developed Career Education (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.

Crafton Hills College currently offers programs within eight CDE sectors:

- Arts, Media, and Entertainment
- Business and Finance
- Education, Child Development, and Family Services
- Health Science and Medical Technology
- Hospitality, Tourism, and Recreation
- Information and Communication Technologies
- Marketing, Sales, and Services
- Public Services

The following sections include the results of a CDE sector analysis that provides details on each CDE sector, including local and regional job openings and median wages for each occupation. Occupations are separated into middle-skill and higher-skill opportunities. Employment opportunities for both middle-skill and higher-skill jobs within each CDE sector that Crafton Hills College does not currently offer training for are provided at the end of each sector or pathway. Exhibits 12 through 42 display annual job openings for the Crafton Hills College area and for the two-county, Inland Empire/Desert Region. All occupational data is sourced from Emsi 20.2 and a CDE to TOP to occupation crosswalk developed by the Centers of Excellence for Labor Market Research. Appendix D displays job openings for each occupation featured in this report.

This analysis details employment opportunities for **48 unique occupations**, yielding **2,090 annual job openings** within the Crafton Hills College area. Approximately 60% of these job opportunities are middle-skill, totaling 1,271 annual job openings. While there are fewer higher-skill opportunities available in the area, these openings typically offer a higher wage.

There are additional employment opportunities in the Crafton Hills College area for which there are currently no relevant training programs being offered. With the appropriate level of education and training, the Crafton Hills College area's resident population could potentially explore an additional 3,850 job openings.





ARTS, MEDIA, AND ENTERTAINMENT INDUSTRY 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.

Design, Visual, and Media Arts Pathway

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

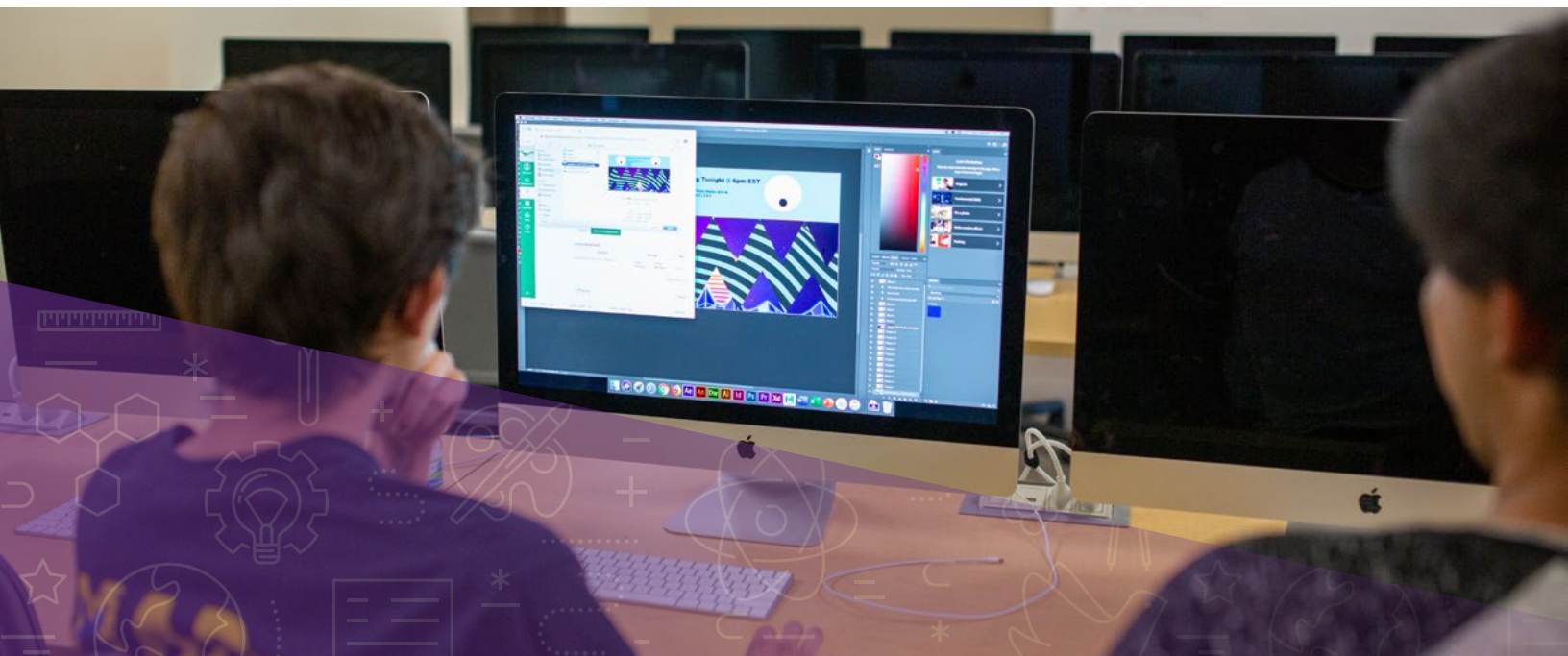
Crafton Hills College programs:

- Computer Assisted Graphic Design
- Multimedia: Digital Animation
- Multimedia: Graphic Media and Design
- Multimedia: Web Development and Interface Design

Exhibit 12: Design, visual, and media arts middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Graphic Designers	148	17	255	\$20.71

Crafton Hills offers a theatre arts program that prepares students for performing arts occupations. Despite this, the occupations trained by the other arts, media, and entertainment pathways, do not have sufficient employment in the region to warrant program development by Crafton Hills College.





BUSINESS AND FINANCE SECTOR

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

Business Management Pathway

Crafton Hills College offers several business management programs under the broad business administration umbrella. The CDE pathways linked to business administration TOP programs are business management and financial services, depending on the concentration. The business management pathway provides entrepreneurship goal setting and resource allocation skills for students entering the workforce. Additionally, these programs support managers and supervisors looking to boost their management techniques. Programs in this pathway train eight occupations that have a combined total of 824 annual job openings in the Crafton Hills College area.

Crafton Hills College programs:

- Administrative Assistant
- Business Administration
- Business Management
- Retail Management

Exhibit 13: Business management middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Administrative Services Managers	2,011	237	2,760	\$18.58
Executive Secretaries and Executive Administrative Assistants	1,136	131	1,981	\$19.24
First-Line Supervisors of Office and Administrative Support Workers	1,132	135	1,750	\$26.41
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	292	33	397	\$28.13
First-Line Supervisors of Retail Sales Workers	200	22	259	\$47.33

Exhibit 14: Business management higher-skill occupations

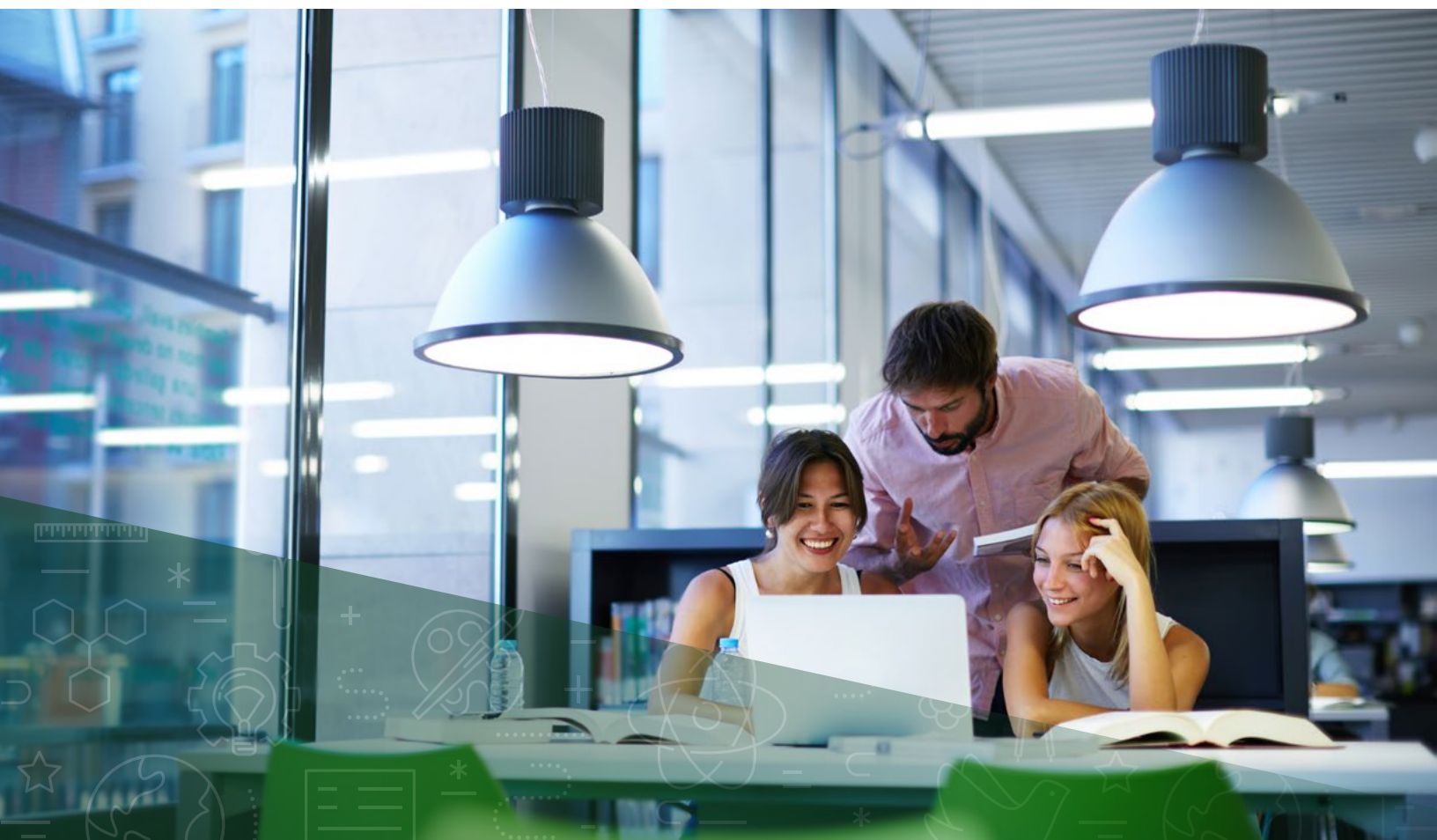
Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
General and Operations Managers	1,330	153	2,162	\$48.54
Managers, All Other	659	63	920	\$34.61
Management Analysts	439	50	679	\$37.83

Additional Business and Finance Sector Training Opportunities

Aside from the occupations listed above, there are other financial services program opportunities that Crafton Hills College may choose to consider providing training for, as these occupations have a substantial number of annual openings in the college area and region. Business and finance training opportunities are projected to offer a total of 312 annual openings in the college area and 4,123 annual openings in the region.

Exhibit 15: Business and finance training opportunities

Business and Finance Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Bookkeeping, Accounting, and Auditing Clerks	1,216	158	2,079	\$19.60
Accountants and Auditors (Higher-skill)	597	70	934	\$33.75
Financial Managers (Higher-skill)	310	33	421	\$53.14
Claims Adjusters, Examiners, and Investigators	294	26	341	\$12.97
Tax Preparers	62	8	123	\$16.73
Personal Financial Advisors (Higher-skill)	123	11	122	\$36.52
Loan Interviewers and Clerks	64	6	103	\$19.92





EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES SECTOR

Education and training in this CDE sector provide students with the skills needed to pursue a career in childcare, family, or social services or become teachers (Heuvel & Ford). Students enrolled in these programs will be qualified to enter the occupations listed below, many of which are higher-skill and in-demand by employers. This CDE sector has four pathways: child development, consumer services, education, and family and human services. This sector's programs lead to 17 unique middle-skill and higher-skill occupations with a combined total of 795 annual job openings in the college area. An additional 238 openings are available with the expansion of program offerings in this sector.

Child Development and Education Pathways

The child development pathway provides students with the training needed to enter middle-skill childcare jobs. The education pathway provides foundational training for future educators, many of whom will require a four-year postsecondary education and a state credential to enter employment. Programs in this pathway train students to enter 17 occupations that have a combined total of 795 annual job openings in the college area. Most job opportunities in this pathway are higher-skill occupations.

Crafton Hills College programs:

- Associate Teacher
- Child Development
- Early Childhood Education
- Master Teacher
- Teacher
- Site Supervisor
- American Sign Language

Exhibit 16: 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
Childcare Workers	1,656	240	2,008	\$12.04
Teacher Assistants	1,235	149	2,469	\$16.84
Preschool Teachers, Except Special Education	381	43	413	\$14.36
Interpreters and Translators	53	7	100	\$26.11
Special Education Teachers, Preschool	39	4	51	\$12.07

Exhibit 17: 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	1,189	105	1,962	\$42.88
Substitute Teachers	754	94	1,788	\$18.05
Secondary School Teachers, Except Special and Career/Technical Education	644	56	1,034	\$40.49
Middle School Teachers, Except Special and Career/Technical Education	194	20	352	\$39.99

Continued

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Instructional Coordinators	150	18	201	\$49.62
Education Administrators, Postsecondary	150	15	84	\$54.33
Education Administrators, Elementary and Secondary School	127	13	220	\$61.85
Special Education Teachers, Kindergarten and Elementary School	115	11	203	\$37.82
Kindergarten Teachers, Except Special Education	67	8	144	\$34.17
Special Education Teachers, Secondary School	63	6	114	\$43.18
Career/Technical Education Teachers, Secondary School	45	4	79	\$39.70
Special Education Teachers, Middle School	23	2	46	\$38.72

Additional Education, Child Development, and Family Services Sector Training Opportunities

Future program development by Crafton Hills College may focus on the family and human services pathway. While the six occupations in this pathway have limited annual job openings in the Crafton Hills College area, abundant job opportunities are available to students willing to commute within the region. Occupations related to education, child development, and family services are projected to offer a total of 238 annual job openings in the college area and 2,156 annual job openings in the region.

Exhibit 18: Education, child development, and family services training opportunities

Education, Child Development, and Family Services Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Social and Human Service Assistants	512	85	713	\$17.90
Substance Abuse, Behavioral Disorder, and Mental Health Counselors (Higher-skill)	405	57	532	\$21.24
Social Workers, All Other (Higher-skill)	221	28	263	\$33.84
Social and Community Service Managers (Higher-skill)	226	32	249	\$30.62
Child, Family, and School Social Workers (Higher-skill)	153	20	234	\$25.85
Community and Social Service Specialists, All Other (Higher-skill)	109	16	165	\$23.93



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.

Crafton Hills College programs:

- Radiologic Technology
- Respiratory Care

Exhibit 19: Patient care middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Respiratory Therapists	306	23	150	\$35.39
Radiologic Technologists	219	15	140	\$36.03

Patient Care Pathway Training Opportunities

Future program development by Crafton Hills College may focus on the following occupations related to the patient care pathway. These occupations have a substantial number of annual openings in the Crafton Hills College area and region. Occupations related to the patient care pathway are projected to have a total of 952 annual job openings in the college area and 8,893 annual job openings in the region.

Exhibit 20: Patient care training opportunities

Patient Care Pathway Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Registered Nurses	4,384	306	2,616	\$47.45
Nursing Assistants	1,177	172	1,311	\$15.62
Medical Assistants	846	108	1,287	\$15.23
Home Health Aides	420	107	995	\$16.01
Licensed Practical and Licensed Vocational Nurses	871	82	809	\$25.10
Dental Assistants	554	78	849	\$15.68
Pharmacy Technicians	353	36	406	\$18.30
Phlebotomists	177	21	196	\$20.26
Dental Hygienists	154	17	186	\$45.41
Surgical Technologists	147	14	135	\$27.39
Physical Therapist Assistants	57	11	103	\$34.61

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. This pathway offers access to 40 annual job openings in the college area. Most of the job openings are in a higher-skill occupations requiring a bachelor's degree.

Crafton Hills College programs:

- Public Health Science

Exhibit 21: Public and community health middle-skill occupation

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Community Health Workers	54	8	82	\$23.48

Exhibit 22: Public and community health higher-skill occupation

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Social and Community Service Managers	226	32	249	\$30.62

Additional Health Science and Medical Technology Training Opportunities

Future program development by Crafton Hills College may focus on the following occupations related to the health care operational support, biotechnology, and mental and behavioral health pathways. While there may not be many job openings in the Crafton Hills College area, these occupations have many employment opportunities in the region. Training opportunities related to health science and medical technology will offer a total of 152 annual openings in the college area and 1,502 annual openings in the region.

Exhibit 23: Health science and medical technology training opportunities

Health Science and Medical Technology Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Medical and Health Services Managers (Higher-skill)	381	40	401	\$56.33
Health Technologists and Technicians, All Other	265	23	366	\$20.28
Healthcare Support Workers, All Other	174	22	208	\$21.26
Clinical Laboratory Technologists and Technicians	254	22	194	\$24.72
Medical Records and Health Information Technicians	283	23	184	\$22.44
Psychiatric Technicians	243	22	149	\$34.62



HOSPITALITY, TOURISM, AND RECREATION SECTOR

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

Crafton Hills College programs:

- Nutrition and Dietetics

Exhibit 24: Food science, dietetics, and nutrition middle-skill occupation

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Dietetic Technicians	65	6	47	\$15.27

Exhibit 25: Food science, dietetics, and nutrition higher-skill occupation

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Dietitians and Nutritionists	92	8	85	\$34.97

Additional Hospitality, Tourism, and Recreation Training Opportunities

Future program development by Crafton Hills College may focus on the hospitality, tourism, and recreation and food service and hospitality pathways. The table below displays a sample of occupations for which Crafton Hills College does not currently offer training. These sample occupations will offer a total of 91 annual openings in the college area and 1,176 annual openings in the region.

Exhibit 26: Hospitality, tourism, and recreation training opportunities

Hospitality, Tourism, and Recreation Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Food Service Managers	365	50	653	\$20.87
Chefs and Head Cooks	128	20	252	\$20.24
Meeting, Convention, and Event Planners (Higher-skill)	82	12	125	\$22.96
First-Line Supervisors of Gaming Workers	81	9	146	\$27.77



INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

Programs related to the Information and Communication Technologies CDE sector prepare students to meet the rapid changes in computer, networking, and software fields. Although most employers in this sector seek candidates with a bachelor's degree, job opportunities also exist for those with a community college education (McCabe & Page). This sector contains information support and services; networking, software and systems development; and game and simulation pathways. Crafton Hills College provides programs in the areas of information support and software and systems development that lead to high-wage, high-growth job opportunities. This sector's programs train 10 middle-skill and higher-skill occupations with a combined total of 142 annual job openings in the Crafton Hills College area.

Information Support and Services Pathway

This pathway prepares students for careers that involve the implementation of computer services and software, support of multimedia products and technical services, and the administration of information and communication systems. This pathway provides skills that lead to six occupations with a combined total of 93 annual job openings in the Crafton Hills College area and 1,043 annual job openings in the Inland Empire/Desert Region.

Crafton Hills College programs:

- IT Technician
- Computer Information Systems
- Cloud Technology Specialists
- Cybersecurity Specialist

Exhibit 27: Information support and services middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Computer User Support Specialists	349	38	390	\$26.11
Network and Computer Systems Administrators	135	13	158	\$38.48
Computer Network Support Specialists	92	9	108	\$28.00

Exhibit 28: 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	164	16	186	\$39.87
Computer and Information Systems Managers	118	13	152	\$68.15
Database Administrators	45	4	49	\$46.72

Software and Systems Development Pathway

This pathway prepares students for careers related to computer science that involve the design, development, implementation, maintenance, and management of systems that rely on software programs to satisfy the operational needs of modern business organizations. Persons with expertise in systems development and programming are critical to support operations like electronic commerce, medical records management, retail sales and inventory management, digital entertainment, and energy

use. This pathway provides skills that lead to four occupations with a combined total of 49 annual job openings in the Crafton Hills College area and 536 annual job openings in the Inland Empire/Desert Region.

Crafton Hills College programs:

- Computer Programming
- User Interface Design
- Web Development

Exhibit 29: Software and systems development middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Web Developers	78	8	109	\$24.36

Exhibit 30: Software and systems development higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Software Developers, Applications	180	24	237	\$48.70
Software Developers, Systems Software	90	10	118	\$48.83
Computer Programmers	79	7	72	\$40.36





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. These programs include the principles of promotion, selling, and communication, which are vital to this sector.

Marketing Pathway

The students in the marketing pathway learn about 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 lead to four middle-skill and higher-skill occupations with a combined total of 168 annual job openings in the Crafton Hills College area and 3,057 annual job openings in the Inland Empire/Desert Region.

Crafton Hills College program:

- Marketing Management

Exhibit 31: Marketing middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	636	81	1,777	\$27.77

Exhibit 32: 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	325	44	591	\$26.18
Sales Managers	314	33	559	\$43.00
Marketing Managers	79	10	130	\$48.04

Additional Marketing, Sales, and Services Sector Training Opportunities

Crafton Hills College does not currently offer programs related to the professional sales and entrepreneurship/self-employment pathways. Middle-skill and higher-skill jobs related to the marketing, sales, and services pathway are projected to have 413 annual job openings in the college area and 5,946 annual job openings in the region.

Exhibit 33: 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
Customer Service Representatives	1,290	191	2,658	\$17.44
Sales Representatives, Services, All Other	627	94	1,437	\$22.92
Real Estate Sales Agents	387	39	476	\$26.42
First-Line Supervisors of Non-Retail Sales Workers	203	22	402	\$24.90
Securities, Commodities, and Financial Services Sales Agents (Higher-skill)	186	18	283	\$20.34
Public Relations Specialists (Higher-skill)	114	15	177	\$29.25
Real Estate Brokers	136	14	168	\$37.66
Advertising Sales Agents	79	11	176	\$20.31
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products (Higher-skill)	70	9	169	\$34.64





PUBLIC SERVICES SECTOR

Public services coursework addresses three pathways: public safety, emergency response, and legal practices (McCabe & Beck). Crafton Hills College offers six programs related to emergency response that lead to two middle-skill occupations – emergency medical technicians and paramedics, and firefighters.

Emergency Response Pathway

The emergency response pathway encompasses standards for designing coursework that can prepare students to enter a number of careers in this field. This pathway provides a foundation for further professional education and training at a postsecondary level, leading to certification and employment. Students gain critical knowledge and skills through in-class and job-site experiences, simulations, and other learning modalities. Career areas include fire services, emergency medical services, wildland services, and emergency management. Programs in this sector train two unique middle-skills occupations with a combined total of 52 annual job openings in the Crafton Hills College area and 549 annual job openings in the region.

Crafton Hills College programs:

- Emergency Medical Technician - I
- Mobile Intensive Care Nurse
- Emergency Medical Services
- Emergency Medical Technician-Paramedic
- Fire Technology
- Firefighter I Basic Training Academy

Exhibit 34: 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	381	35	280	\$15.49
Firefighters	184	17	269	\$30.40

Additional Public Services Sector Training Opportunities

Future development in this sector may focus on the public safety and legal practices pathways. The six middle-skill occupations shown in Exhibit 35 account for 109 annual job openings in the college area and 1,744 annual job openings in the region.

Exhibit 35: Public services training opportunities

Public Services Sector Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Police and Sheriff's Patrol Officers	456	41	628	\$47.03
Correctional Officers and Jailers	319	31	463	\$38.33
Paralegals and Legal Assistants	118	16	262	\$27.46
Legal Secretaries	83	9	152	\$25.39
Probation Officers and Correctional Treatment Specialists (Higher-skill)	83	8	125	\$38.66
Detectives and Criminal Investigators	72	6	85	\$49.12
First-Line Supervisors of Protective Service Workers, All Other	54	6	154	\$18.18



ADDITIONAL CAREER EDUCATION SECTORS AND JOBS

There are seven CDE sectors for which Crafton Hills College has no related programs. This section of the report discusses the pathways leading into these sectors and their related middle-skill and higher-skill occupations that are in-demand and provide high-wages. Crafton Hills College may choose to consider training for these occupations as the college expands its CE offerings.

Agriculture and Natural Resources Sector

Students in the agriculture and natural resources sector acquire foundational skills and knowledge in agricultural business, mechanics, science, and animal care (Heuvel & Mooney). This sector will offer 15 annual job openings in the college area and 497 annual job openings in the region.

Exhibit 36: Agriculture and natural resources training opportunities

Agriculture and Natural Resources Training Opportunities, Middle-skill	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	89	11	267	\$22.64
Farmers, Ranchers, and Other Agricultural Managers	47	4	230	\$21.41

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 into a construction trade (McCabe & Dunn). This sector will offer 659 annual job openings in the college area and 10,156 annual job openings in the region.

Exhibit 37: Building and construction training opportunities

Building and Construction Trades Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Carpenters	1,585	189	2,591	\$22.93
Maintenance and Repair Workers, General	1,056	129	1,684	\$19.84
Electricians	422	66	1,365	\$24.28
First-Line Supervisors of Construction Trades and Extraction Workers	487	60	1,000	\$32.24
Plumbers, Pipefitters, and Steamfitters	372	54	983	\$24.48
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	232	32	572	\$19.96
Operating Engineers and Other Construction Equipment Operators	221	29	554	\$38.15
First-Line Supervisors of Mechanics, Installers, and Repairers	254	28	500	\$33.91
Structural Iron and Steel Workers	161	25	237	\$32.33
Sheet Metal Workers	106	15	261	\$24.15
Glaziers	94	14	125	\$29.05
Construction and Building Inspectors	76	11	164	\$40.80
Brickmasons and Blockmasons	65	7	120	\$24.57

Energy, Environment, and Utilities Sector

Students enrolled in coursework related to this CDE sector acquire foundational skills in environmental resources, energy and power technology, and telecommunications (McCabe & Yates). This sector will offer 44 annual job openings in the college area and 876 annual job openings in the region.

Exhibit 38: 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	179	20	403	\$26.71
Water and Wastewater Treatment Plant and System Operators	99	9	146	\$32.87
Electrical Power-Line Installers and Repairers	78	8	148	\$35.93
Telecommunications Line Installers and Repairers	58	7	179	\$25.59

Engineering and Architecture Sector

Engineering and architecture students can expand career awareness through four pathways in this sector: architectural design, engineering technology, engineering design, and environmental engineering. This sector will offer 51 annual job openings in the college area and 853 annual job openings in the region.

Exhibit 39: Engineering and architecture training opportunities

Engineering and Architecture Sector Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Civil Engineers (Higher-skill)	171	17	285	\$52.01
Architects, Except Landscape and Naval (Higher-skill)	73	9	102	\$35.82
Architectural and Civil Drafters	73	9	123	\$27.44
Architectural and Engineering Managers (Higher-skill)	60	6	101	\$70.20
Mechanical Engineers (Higher-skill)	58	5	123	\$40.53
Industrial Engineers (Higher-skill)	47	5	119	\$38.44

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). This sector will offer 250 annual job openings in the college area and 3,077 annual job openings in the region.

Exhibit 40: Fashion and interior design training opportunities

Fashion and Interior Design Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Hairdressers, Hairstylists, and Cosmetologists	884	127	1,530	\$14.95
First-Line Supervisors of Personal Service Workers	359	49	433	\$17.62
Manicurists and Pedicurists	187	27	371	\$12.84
Massage Therapists	186	28	384	\$15.94
Skincare Specialists	62	9	126	\$14.87
Interior Designers	43	5	72	\$23.58
Barbers	34	5	161	\$12.14

Manufacturing and Product Development Sector

Coursework related to the manufacturing and product development CDE sector teaches students the hands-on fundamentals of manufacturing processes and systems in California (McCabe & Oliveira). This sector will offer 127 annual job openings in the college area and 3,049 annual job openings in the region.

Exhibit 41: Manufacturing and product development training opportunities

Engineering and Architecture Sector Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Inspectors, Testers, Sorters, Samplers, and Weighers	202	27	625	\$17.65
First-Line Supervisors of Production and Operating Workers	203	25	589	\$28.35
Welders, Cutters, Solderers, and Brazers	127	16	439	\$18.41
Machinists	117	13	411	\$19.27
Industrial Machinery Mechanics	92	10	301	\$27.95
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	123	18	230	\$15.08
Printing Press Operators	41	5	128	\$18.04
Molders, Shapers, and Casters, Except Metal and Plastic	38	4	117	\$14.56
Electrical and Electronics Engineering Technicians	54	6	107	\$29.45
Computer-Controlled Machine Tool Operators, Metal and Plastic	23	3	102	\$17.92

Transportation Sector

The transportation-related 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. This sector will offer 429 annual job openings in the college area and 9,472 annual job openings in the region.

Exhibit 42: Transportation training opportunities

Transportation Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Heavy and Tractor-Trailer Truck Drivers	1,094	159	4,395	\$21.57
Automotive Service Technicians and Mechanics	643	67	1,217	\$19.51
First-line Supervisors of Transportation and	127	16	439	\$18.41
Material Moving Workers, Except Aircraft Cargo Handling Supervisors	408	63	1,134	\$27.19
Production, Planning, and Expediting Clerks	263	36	537	\$22.06
Bus Drivers, School or Special Client	178	28	516	\$20.60
Bus and Truck Mechanics and Diesel Engine Specialists	165	18	483	\$24.05
Transportation, Storage, and Distribution Managers	137	17	279	\$41.71
Bus Drivers, Transit and Intercity	94	13	196	\$20.53
Mobile Heavy Equipment Mechanics, Except Engines	91	10	240	\$30.12
Automotive Body and Related Repairers	79	9	167	\$18.48
Cargo and Freight Agents	30	5	123	\$23.15
Aircraft Mechanics and Service Technicians	37	4	185	\$34.63



KEY FINDINGS AND RECOMMENDATIONS

Key findings

The fastest-growing age group in the Crafton Hills College area is residents age 65 and older. As a result, the college should consider focusing on providing health care training to support the area's anticipated need for more workers to care for an aging population. The health care and social assistance industry is the largest employer in the area and is expected to add 4,856 additional jobs by 2024.

Educational attainment in the college area is fairly low, with only 16% of area residents holding a bachelor's degree as their highest level of educational attainment. This percentage is slightly higher than the region but is significantly lower than the state as a whole, 22%. Crafton Hills College should consider creating transfer programs that will increase bachelor's degree attainment in the area.

There are seven CDE sectors without related programs offered by Crafton Hills College. Over the next five years, these seven sectors are projected to have 1,575 annual job openings for middle-skill and higher-skill occupations in the college area. These sectors and their respective annual job openings in the college area and region are:

- Building and Construction Trades: 659 annual job openings in the college area and 10,156 annual job openings in the region
- Transportation: 429 annual job openings in the college area and 9,472 annual job openings in the region
- Fashion and Interior Design: 250 annual job openings in the college area and 3,077 annual job openings in the region
- Manufacturing and Product Development: 127 annual job openings in the college area and 3,049 annual job openings in the region
- Engineering and Architecture: 51 annual job openings in the college area and 853 annual job openings in the region
- Energy, Environment, and Utilities: 44 annual job openings in the college area and 876 annual job openings in the region
- Agriculture and Natural Resources Sector: 15 annual job openings in the college area and 497 annual job openings in the region

Recommendations

There are multiple employment opportunities in the area that are not currently being addressed by career education programs offered through Crafton Hills College. The building and construction trades and transportation sectors do not currently have training programs, but have the highest projected number of annual openings in the area and region. Manufacturing and product development may be another area the college wishes to consider for new programs since two occupations-- inspectors, testers, sorters, samplers, and weighers, and first-line supervisors of production and operating workers-- combined account for more than 1,200 annual openings in the region.

The college should strongly consider expanding offerings in the health science and medical technology sector, especially given the college's proximity to large healthcare employers. The patient care pathway and the public and community health pathway lead to several in-demand and high-wage occupations not addressed by the college's current offerings. Jobs relevant to nursing programs are in demand in the area and offer high-wages. Jobs related to public and community health are also in demand and provide high-wages if program completers are willing to commute within the Inland Empire/Desert Region.

There are three sectors with notable projected workforce demand for which the college may choose to consider expanding its existing programs:

- **Patient Care:** Patient care occupations will offer a total of 952 annual openings in the college area and 8,893 annual openings in the region. Specific occupations to consider for program development include registered nurses, nursing assistants, medical assistants, home health aides, licensed practical and licensed vocational nurses, and dental assistants. These occupations are expected to have substantial employer demand locally and in the region.
- **Marketing, Sales, and Services:** Middle-skill and higher-skill jobs related to the marketing, sales, and services pathway account for 413 annual job openings in the college area and 5,946 annual job openings in the region, with the majority of these openings in middle-skill occupations. Occupations with a promising employment outlook include customer service representatives and sales representatives (services, all other).
- **Business and Finance:** Middle-skill and higher-skill business and finance occupations will offer a total of 312 annual openings in the college area and 4,123 annual openings in the region. Occupations to consider for program development include bookkeeping, accounting, and auditing clerks (middle skill) and accountants and auditors (higher-skill).

Considering sectors for which Crafton Hills College currently does not offer programs, the transportation sector is a likely candidate for further exploration. This industry sector is highly concentrated in the Crafton Hills College area and is expected to add 1,671 jobs by 2024. First-line supervisors of transportation and material moving workers is an occupation that appears to be a good option for program development. This occupation is in-demand across the region and offers a high-wage. Multiple occupational opportunities exist in this sector, especially if program completers are willing to commute outside the Crafton Hills College area for work.

Before the college considers developing any of the recommended programs, meetings should be held with relevant employers to understand the knowledge, skills, abilities, and certifications necessary for students to secure employment in these fields and earn a self-sustaining wage shortly after exiting a community college program.



APPENDIX A: CRAFTON HILLS COLLEGE AREA

The 22 ZIP codes employed for this analysis may not perfectly follow Crafton Hills College'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.

Exhibit A1: Population and job counts for ZIP codes in the Crafton Hills College area

ZIP	City/Community	2019 Population	2019 Jobs	Middle-skill Job Count
92223	Beaumont, CA	56,315	9,960	3,721
92305	Angelus Oaks, CA	626	177	54
92314	Big Bear City, CA	12,979	1,422	678
92315	Big Bear Lake, CA	5,248	5,810	1,836
92317	Blue Jay, CA	74	1,081	332
92320	Calimesa, CA	9,628	2,623	1,297
92321	Cedar Glen, CA	6	208	94
92325	Crestline, CA	8,214	2,524	686
92333	Fawnskin, CA	378	159	58
92339	Forest Falls, CA	1,062	1,161	353
92346	Highland, CA	62,881	13,810	4,143
92350	Loma Linda, CA	0	2,696	1,898
92352	Lake Arrowhead, CA	2,804	2,866	1,020
92354	Loma Linda, CA	24,405	12,006	5,590
92357	Loma Linda, CA	0	2,358	1,701
92359	Mentone, CA	9,010	1,272	550
92373	Redlands, CA	30,952	24,148	9,919
92374	Redlands, CA	45,536	29,799	9,899
92375	Redlands, CA	1,114	229	95
92382	Running Springs, CA	4,739	1,093	377
92385	Skyforest, CA	285	167	44
92399	Yucaipa, CA	53,067	11,599	4,559
	TOTAL	329,323	127,169	48,905

APPENDIX B: DEMOGRAPHIC COMPOSITION REFERENCE

Exhibit B1: Gender by area

Gender	College Area (Percentage)	Region (Percentage)
Male	49.0%	49.8%
Female	51.0%	50.2%

Exhibit B2: Race and ethnicity by area

Race	College Area	College Area (Percentage)	Regional (Percentage)
White	257,847	78.3%	78%
Black	23,723	7.2%	8%
Two or More Races	10,978	3.3%	4%
Asian	27,247	8.3%	7%
American Indian or Native Alaskan	6,936	2.1%	2%
Native Hawaiian or Pacific Islander	2,594	0.8%	0.5%
"Total Hispanic (All Races)	122,523	37.2%	52%

Exhibit B3: Age by area

Age Group	College Area 2019 Share	College Area 5-year Growth Rate	Regional 2019 Share	Regional 5-year Growth Rate
0-9	13%	3%	14%	7%
10-14	7%	-2%	7%	-3%
15-19	6%	0%	7%	1%
20-24	6%	-8%	7%	-5%
25-34	14%	-1%	15%	3%
35-44	13%	8%	13%	8%
45-54	11%	-4%	12%	-1%
55-64	13%	-5%	11%	1%
65+	17%	16%	13%	18%

Exhibit B4: Unemployment rate by community

City/Community	Annual Average 2019	August 2020	September 2020	October 2020
Beaumont	3.3%	9.2%	9.0%	8.0%
Big Bear City	2.3%	6.4%	6.2%	5.6%
Big Bear Lake	1.4%	4.0%	3.9%	3.5%
Calimesa	4.2%	10.6%	10.3%	8.9%
Crestline	2.4%	6.6%	6.4%	5.7%
Highland	3.8%	11.2%	10.9%	10.0%
Lake Arrowhead	4.0%	10.9%	10.7%	9.5%
Loma Linda	2.4%	6.8%	6.6%	5.9%
Mentone	3.3%	9.0%	8.8%	7.9%
Redlands	3.0%	8.0%	7.8%	6.8%
Running Springs	5.3%	13.9%	13.7%	12.3%
Yucaipa	3.2%	8.2%	8.0%	6.7%



APPENDIX C: INDUSTRY AND LOCATION QUOTIENT DEFINITIONS, AND SECTORS WITH FEWER THAN 2,000 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, Crafton Hills College employs faculty, but the institution also hires a variety of administrators and support staff to maintain operations. The same is true for most industries. Regional educational institutions should be aware of the types of industries in their area to help inform the needed industry-specific occupational skills that may be required by local employers.

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

Major industry sectors with fewer than 2,000 jobs, along with their 2019 job count and expected five-year job growth are:

- **Finance and insurance**, 1,654 jobs in 2019, reduction of 78 jobs by 2024
- **Information**, 1,215 jobs in 2019, addition of 49 jobs by 2024
- **Utilities**, 607 jobs in 2019, reduction of 81 jobs by 2024
- **Agriculture, forestry, fishing, and hunting**, 593 jobs in 2019, addition of 150 jobs by 2024
- **Management of companies and enterprises**, 261 jobs in 2019, reduction of 25 jobs by 2024
- **Mining, quarrying, and oil and gas extraction**, 44 jobs in 2019, addition of four 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 sector, but these jobs may also be employed by educational industries. The Standard Occupational Classification (SOC) System classifies 775 detailed occupations according to the tasks and duties of each job.

Skill Level Categories

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

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

Perkins V requirements are used to determine the occupations that are good investments for training resources. In addition to the training program that need 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
Heavy and Tractor-Trailer Truck Drivers	Middle-skill	159	4,395	\$16.43	\$21.57	\$28.71	Both
Administrative Services Managers	Middle-skill	237	2,760	\$34.42	\$18.58	\$62.97	Both
Customer Service Representatives	Middle-skill	191	2,658	\$13.88	\$17.44	\$22.85	In-demand
Registered Nurses	Middle-skill	306	2,616	\$38.82	\$47.45	\$58.41	Both
Carpenters	Middle-skill	189	2,591	\$16.61	\$22.93	\$29.57	Both
Teacher Assistants	Middle-skill	149	2,469	\$13.79	\$16.84	\$19.75	In-demand
General and Operations Managers	Higher-skill	153	2,162	\$31.34	\$48.54	\$69.84	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
Bookkeeping, Accounting, and Auditing Clerks	Middle-skill	158	2,079	\$15.76	\$19.60	\$25.17	Both
Childcare Workers	Middle-skill	240	2,008	\$9.71	\$12.04	\$15.76	In-demand
Executive Secretaries and Executive Administrative Assistants	Middle-skill	131	1,981	\$23.06	\$19.24	\$34.25	Both
Elementary School Teachers, Except Special Education	Higher-skill	105	1,962	\$33.13	\$42.88	\$48.90	Both
Substitute Teachers	Higher-skill	94	1,788	\$16.37	\$18.05	\$21.09	In-demand
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Middle-skill	81	1,777	\$18.91	\$27.77	\$39.03	Both
First-Line Supervisors of Office and Administrative Support Workers	Middle-skill	135	1,750	\$20.78	\$26.41	\$33.50	Both
Maintenance and Repair Workers, General	Middle-skill	129	1,684	\$14.89	\$19.84	\$26.30	In-demand
Hairdressers, Hairstylists, and Cosmetologists	Middle-skill	127	1,530	\$11.13	\$14.95	\$20.97	In-demand
Sales Representatives, Services, All Other	Middle-skill	94	1,437	\$14.82	\$22.92	\$33.68	Both
Electricians	Middle-skill	66	1,365	\$18.07	\$24.28	\$32.53	Both
Nursing Assistants	Middle-skill	172	1,311	\$13.07	\$15.62	\$18.45	In-demand
Medical Assistants	Middle-skill	108	1,287	\$13.13	\$15.23	\$17.83	In-demand
Automotive Service Technicians and Mechanics	Middle-skill	67	1,217	\$14.31	\$19.51	\$27.00	In-demand
First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	Middle-skill	63	1,134	\$20.66	\$27.19	\$33.41	Both
Secondary School Teachers, Except Special and Career/Technical Education	Higher-skill	56	1,034	\$31.61	\$40.49	\$47.02	Both
First-Line Supervisors of Construction Trades and Extraction Workers	Middle-skill	60	1,000	\$24.06	\$32.24	\$42.99	Both
Home Health Aides	Middle-skill	107	995	\$13.36	\$16.01	\$19.73	In-demand
Plumbers, Pipefitters, and Steamfitters	Middle-skill	54	983	\$16.81	\$24.48	\$30.10	Both
Accountants and Auditors	Higher-skill	70	934	\$25.84	\$33.75	\$42.91	Both
Managers, All Other	Higher-skill	63	920	\$17.06	\$34.61	\$57.22	Both
Dental Assistants	Middle-skill	78	849	\$13.48	\$15.68	\$19.46	In-demand

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Licensed Practical and Licensed Vocational Nurses	Middle-skill	82	809	\$20.90	\$25.10	\$29.89	Both
Social and Human Service Assistants	Middle-skill	85	713	\$14.94	\$17.90	\$23.68	In-demand
Management Analysts	Higher-skill	50	679	\$26.81	\$37.83	\$53.36	Both
Food Service Managers	Middle-skill	50	653	\$15.83	\$20.87	\$29.15	Both
Police and Sheriff's Patrol Officers	Middle-skill	41	628	\$36.88	\$47.03	\$57.47	Both
Inspectors, Testers, Sorters, Samplers, and Weighers	Middle-skill	27	625	\$14.04	\$17.65	\$23.35	In-demand
Market Research Analysts and Marketing Specialists	Higher-skill	44	591	\$18.54	\$26.18	\$36.30	Both
First-Line Supervisors of Production and Operating Workers	Middle-skill	25	589	\$21.56	\$28.35	\$38.26	Both
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Middle-skill	32	572	\$16.33	\$19.96	\$26.93	Both
Sales Managers	Higher-skill	33	559	\$27.32	\$43.00	\$71.18	Both
Operating Engineers and Other Construction Equipment Operators	Middle-skill	29	554	\$26.92	\$38.15	\$45.18	Both
Production, Planning, and Expediting Clerks	Middle-skill	36	537	\$17.76	\$22.06	\$27.74	Both
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Higher-skill	57	532	\$17.20	\$21.24	\$26.94	Both
Bus Drivers, School or Special Client	Middle-skill	28	516	\$17.10	\$20.60	\$22.95	In-demand
First-Line Supervisors of Mechanics, Installers, and Repairers	Middle-skill	28	500	\$26.09	\$33.91	\$42.44	Both
Bus and Truck Mechanics and Diesel Engine Specialists	Middle-skill	18	483	\$18.32	\$24.05	\$30.33	Both
Real Estate Sales Agents	Middle-skill	39	476	\$15.97	\$26.42	\$44.61	Both
Correctional Officers and Jailers	Middle-skill	31	463	\$29.37	\$38.33	\$43.30	Both
Welders, Cutters, Solderers, and Brazers	Middle-skill	16	439	\$15.24	\$18.41	\$23.15	In-demand
First-Line Supervisors of Personal Service Workers	Middle-skill	49	433	\$14.76	\$17.62	\$24.50	In-demand
Financial Managers	Higher-skill	33	421	\$36.52	\$53.14	\$72.74	Both
Preschool Teachers, Except Special Education	Middle-skill	43	413	\$12.55	\$14.36	\$17.65	In-demand
Machinists	Middle-skill	13	411	\$15.35	\$19.27	\$25.28	Both
Pharmacy Technicians	Middle-skill	36	406	\$15.40	\$18.30	\$23.00	In-demand

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Telecommunications Equipment Installers and Repairers, Except Line Installers	Middle-skill	20	403	\$22.21	\$26.71	\$30.13	Both
First-Line Supervisors of Non-Retail Sales Workers	Middle-skill	22	402	\$15.25	\$24.90	\$37.23	Both
Medical and Health Services Managers	Higher-skill	40	401	\$43.12	\$56.33	\$70.83	Both
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	Middle-skill	33	397	\$14.16	\$28.13	\$23.76	In-demand
Computer User Support Specialists	Middle-skill	38	390	\$19.54	\$26.11	\$34.08	Both
Massage Therapists	Middle-skill	28	384	\$11.45	\$15.94	\$25.98	In-demand
Manicurists and Pedicurists	Middle-skill	27	371	\$11.02	\$12.84	\$14.91	In-demand
Health Technologists and Technicians, All Other	Middle-skill	23	366	\$17.42	\$20.28	\$23.00	Both
Middle School Teachers, Except Special and Career/ Technical Education	Higher-skill	20	352	\$31.64	\$39.99	\$45.96	Both
Claims Adjusters, Examiners, and Investigators	Middle-skill	26	341	\$11.74	\$12.97	\$32.67	Both
Industrial Machinery Mechanics	Middle-skill	10	301	\$22.40	\$27.95	\$33.68	Both
Civil Engineers	Higher-skill	17	285	\$40.81	\$52.01	\$63.56	Both
Securities, Commodities, and Financial Services Sales Agents	Higher-skill	18	283	\$17.11	\$20.34	\$27.11	Both
Emergency Medical Technicians and Paramedics	Middle-skill	35	280	\$12.10	\$15.49	\$20.02	In-demand
Transportation, Storage, and Distribution Managers	Middle-skill	17	279	\$32.81	\$41.71	\$54.09	Both
Firefighters	Middle-skill	17	269	\$25.92	\$30.40	\$37.87	Both
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Middle-skill	11	267	\$15.42	\$22.64	\$32.54	Both
Social Workers, All Other	Higher-skill	28	263	\$27.08	\$33.84	\$41.17	Both
Paralegals and Legal Assistants	Middle-skill	16	262	\$22.27	\$27.46	\$35.00	Both
Sheet Metal Workers	Middle-skill	15	261	\$17.17	\$24.15	\$30.67	Both
First-Line Supervisors of Retail Sales Workers	Middle-skill	22	259	\$14.17	\$47.33	\$25.07	In-demand
Graphic Designers	Middle-skill	17	255	\$16.44	\$20.71	\$29.83	Both
Chefs and Head Cooks	Middle-skill	20	252	\$14.00	\$20.24	\$32.18	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
Social and Community Service Managers	Higher-skill	32	249	\$18.91	\$30.62	\$49.47	Both
Social and Community Service Managers	Higher-skill	32	249	\$18.91	\$30.62	\$49.47	Both
Mobile Heavy Equipment Mechanics, Except Engines	Middle-skill	10	240	\$24.21	\$30.12	\$35.78	Both
Software Developers, Applications	Higher-skill	24	237	\$38.82	\$48.70	\$60.83	Both
Structural Iron and Steel Workers	Middle-skill	25	237	\$21.97	\$32.33	\$39.40	Both
Child, Family, and School Social Workers	Higher-skill	20	234	\$20.13	\$25.85	\$33.33	Both
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	Middle-skill	18	230	\$12.77	\$15.08	\$19.58	In-demand
Farmers, Ranchers, and Other Agricultural Managers	Middle-skill	4	230	\$16.19	\$21.41	\$51.02	Both
Education Administrators, Elementary and Secondary School	Higher-skill	13	220	\$55.38	\$61.85	\$71.29	Both
Healthcare Support Workers, All Other	Middle-skill	22	208	\$18.22	\$21.26	\$24.08	In-demand
Special Education Teachers, Kindergarten and Elementary School	Higher-skill	11	203	\$29.24	\$37.82	\$47.13	Both
Instructional Coordinators	Higher-skill	18	201	\$37.16	\$49.62	\$57.60	Both
Bus Drivers, Transit and Intercity	Middle-skill	13	196	\$15.14	\$20.53	\$23.86	Both
Phlebotomists	Middle-skill	21	196	\$17.24	\$20.26	\$24.18	Both
Clinical Laboratory Technologists and Technicians	Middle-skill	22	194	\$19.21	\$24.72	\$35.08	Both
Computer Systems Analysts	Higher-skill	16	186	\$31.78	\$39.87	\$50.65	Both
Dental Hygienists	Middle-skill	17	186	\$40.54	\$45.41	\$50.58	Both
Aircraft Mechanics and Service Technicians	Middle-skill	4	185	\$27.04	\$34.63	\$48.55	Both
Medical Records and Health Information Technicians	Middle-skill	23	184	\$17.09	\$22.44	\$36.36	Both
Telecommunications Line Installers and Repairers	Middle-skill	7	179	\$17.20	\$25.59	\$35.66	Both
Public Relations Specialists	Higher-skill	15	177	\$21.09	\$29.25	\$40.28	Both
Advertising Sales Agents	Middle-skill	11	176	\$14.90	\$20.31	\$35.99	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
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Higher-skill	9	169	\$24.30	\$34.64	\$52.10	Both
Real Estate Brokers	Middle-skill	14	168	\$18.25	\$37.66	\$56.98	Both
Automotive Body and Related Repairers	Middle-skill	9	167	\$13.27	\$18.48	\$28.57	Both
Community and Social Service Specialists, All Other	Higher-skill	16	165	\$13.81	\$23.93	\$31.70	Both
Construction and Building Inspectors	Middle-skill	11	164	\$31.27	\$40.80	\$53.80	Both
Barbers	Middle-skill	5	161	\$7.28	\$12.14	\$17.29	In-demand
Network and Computer Systems Administrators	Middle-skill	13	158	\$30.39	\$38.48	\$50.43	Both
First-Line Supervisors of Protective Service Workers, All Other	Middle-skill	6	154	\$13.49	\$18.18	\$28.43	Both
Computer and Information Systems Managers	Higher-skill	13	152	\$52.52	\$68.15	\$82.80	Both
Legal Secretaries	Middle-skill	9	152	\$18.20	\$25.39	\$30.85	Both
Respiratory Therapists	Middle-skill	23	150	\$29.33	\$35.39	\$41.59	Both
Psychiatric Technicians	Middle-skill	22	149	\$31.98	\$34.62	\$37.58	Both
Electrical Power-Line Installers and Repairers	Middle-skill	8	148	\$25.84	\$35.93	\$54.40	Both
First-Line Supervisors of Gaming Workers	Middle-skill	9	146	\$20.78	\$27.77	\$33.45	Both
Water and Wastewater Treatment Plant and System Operators	Middle-skill	9	146	\$26.25	\$32.87	\$40.77	Both
Kindergarten Teachers, Except Special Education	Higher-skill	8	144	\$24.89	\$34.17	\$38.76	Both
Radiologic Technologists	Middle-skill	15	140	\$30.62	\$36.03	\$41.78	Both
Surgical Technologists	Middle-skill	14	135	\$22.87	\$27.39	\$32.60	Both
Marketing Managers	Higher-skill	10	130	\$35.55	\$48.04	\$70.92	Both
Printing Press Operators	Middle-skill	5	128	\$14.58	\$18.04	\$22.18	In-demand
Skincare Specialists	Middle-skill	9	126	\$11.36	\$14.87	\$20.61	In-demand
Glaziers	Middle-skill	14	125	\$17.08	\$29.05	\$55.40	Both
Meeting, Convention, and Event Planners	Higher-skill	12	125	\$17.25	\$22.96	\$33.04	Both
Probation Officers and Correctional Treatment Specialists	Higher-skill	8	125	\$32.78	\$38.66	\$50.79	Both
Architectural and Civil Drafters	Middle-skill	9	123	\$20.13	\$27.44	\$36.01	Both
Cargo and Freight Agents	Middle-skill	5	123	\$19.10	\$23.15	\$30.07	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
Mechanical Engineers	Higher-skill	5	123	\$32.57	\$40.53	\$50.53	Both
Tax Preparers	Middle-skill	8	123	\$11.75	\$16.73	\$31.80	Both
Personal Financial Advisors	Higher-skill	11	122	\$25.86	\$36.52	\$87.10	Both
Brickmasons and Blockmasons	Middle-skill	7	120	\$17.17	\$24.57	\$29.75	Both
Industrial Engineers	Higher-skill	5	119	\$29.74	\$38.44	\$48.97	Both
Software Developers, Systems Software	Higher-skill	10	118	\$37.41	\$48.83	\$62.03	Both
Molders, Shapers, and Casters, Except Metal and Plastic	Middle-skill	4	117	\$12.00	\$14.56	\$19.57	In-demand
Special Education Teachers, Secondary School	Higher-skill	6	114	\$37.33	\$43.18	\$47.84	Both
Web Developers	Middle-skill	8	109	\$16.52	\$24.36	\$36.27	Both
Computer Network Support Specialists	Middle-skill	9	108	\$22.76	\$28.00	\$37.23	Both
Electrical and Electronics Engineering Technicians	Middle-skill	6	107	\$22.49	\$29.45	\$38.39	Both
Loan Interviewers and Clerks	Middle-skill	6	103	\$16.65	\$19.92	\$25.01	Both
Physical Therapist Assistants	Middle-skill	11	103	\$30.72	\$34.61	\$38.13	Both
Architects, Except Landscape and Naval	Higher-skill	9	102	\$25.70	\$35.82	\$53.67	Both
Computer-Controlled Machine Tool Operators, Metal and Plastic	Middle-skill	3	102	\$14.48	\$17.92	\$22.20	In-demand
Architectural and Engineering Managers	Higher-skill	6	101	\$55.58	\$70.20	\$83.70	Both
Interpreters and Translators	Middle-skill	7	100	\$18.52	\$26.11	\$40.13	Both
Detectives and Criminal Investigators	Middle-skill	6	85	\$45.11	\$49.12	\$58.20	Both
Dietitians and Nutritionists	Higher-skill	8	85	\$28.59	\$34.97	\$40.58	Both
Education Administrators, Postsecondary	Higher-skill	15	84	\$40.05	\$54.33	\$72.60	Both
Community Health Workers	Middle-skill	8	82	\$19.16	\$23.48	\$30.30	Both
Career/Technical Education Teachers, Secondary School	Higher-skill	4	79	\$35.07	\$39.70	\$45.29	Both
Computer Programmers	Higher-skill	7	72	\$29.41	\$40.36	\$48.42	Both
Interior Designers	Middle-skill	5	72	\$17.21	\$23.58	\$31.21	Both
Special Education Teachers, Preschool	Middle-skill	4	51	\$11.00	\$12.07	\$18.09	Neither
Database Administrators	Higher-skill	4	49	\$33.88	\$46.72	\$61.31	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
Dietetic Technicians	Middle-skill	6	47	\$11.81	\$15.27	\$19.20	In-demand
Special Education Teachers, Middle School	Higher-skill	2	46	\$33.38	\$38.72	\$45.60	Both

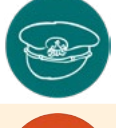


APPENDIX E: CDE-TO-CCCCO-PRIORITY-SECTOR CROSSWALK

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 & Renewables



APPENDIX F: REFERENCES CITED AND RESOURCES

- American Community Survey. (2020). 2018: ACS 5-Year Estimates Subject Tables. United States Census Bureau. Retrieved from <https://data.census.gov/>
- Crafton Hills College. (2020). 2020-2021 Catalog. Retrieved from <https://craftonhills.smartcatalogiq.com/2020-2021/Catalog>
- California Department of Education. (2020). CTE Model Curriculum Standards. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/ctemcstandards.asp>
- California Labor Market Information Division (CA LMID). (2020) Employment by Industry Data. Retrieved from <https://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html>
- Centers of Excellence for Labor Market Research. (2017, August). TOP to SOC Crosswalk. Retrieved from <http://coeccc.net/>
- Economic Modeling Specialists International. Datarun 2020.2. (2020). Retrieved from <https://www.economicmodeling.com/>
- Edmonds, K., Mitchel, J. (2017, January). Arts, Media, and Entertainment. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/artsmedia.pdf>
- Heuvel, B., Ford, A. (2017, January). Education, Child Development, and Family Services. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/edchildfamily.pdf>
- Heuvel, B., Mooney, H. (2017, January). Agriculture and Natural Resources. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/agnatural.pdf>
- Heuvel, B., Webb, M. (2017, January). Fashion and Interior Design. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/fashioninterior.pdf>
- Heuvel, B., Wright, T. (2017, January). Hospitality, Tourism, and Recreation. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/hosptourrec.pdf>
- McCabe, L., Beck, C. (2017, January). Health Science and Medical Technology. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/healthmedical.pdf>
- McCabe, L., Beck, C. (2017, January). Public Services. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/pubservices.pdf>
- McCabe, L., Dubois, D. (2017, January). Transportation. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/transportation.pdf>
- McCabe, L., Dunn, J. (2017, January). Building and Construction Trades. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/buildingconstruct.pdf>
- McCabe, L., Dunn, J. (2017, January). Engineering and Architecture. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/enginearchit.pdf>
- McCabe, L., Ferrier, K. (2017, January). Marketing, Sales, and Services. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/mktsalesservices.pdf>
- McCabe, L., Ferrier, K., Yates, M. (2017, January). Business and Finance. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/bizfinance.pdf>
- McCabe, L., Oliveira, M. (2017, January). Manufacturing and Product Development. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/manproddev.pdf>

McCabe, L., Page, G. (2017, January). Information and Communication Technologies. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/infocomtech.pdf>

McCabe, L., Yates, M. (2017, January). Energy, Environment, and Utilities. Retrieved from <https://www.cde.ca.gov/ci/ct/sf/documents/energyutilities.pdf>

National Center for O*NET Development. (2020). O*NET OnLine. Retrieved from <https://www.onetonline.org/>

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



MORE ABOUT THE CENTERS OF EXCELLENCE

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

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

For more information on this study, contact:

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

Important Disclaimer

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

© 2020 California Community Colleges Chancellor's Office Economic and Workforce Development Program

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

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

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



craftonhills.edu



coecccc.net



California
Community
Colleges

cccco.edu