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NORCO COLLEGE LOCAL WORKFORCE DEMAND ASSESSMENT



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

Strong Workforce Data Analytics
and Alignment Project

NORCO
COLLEGE



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

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COVID-19 Disclaimer

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

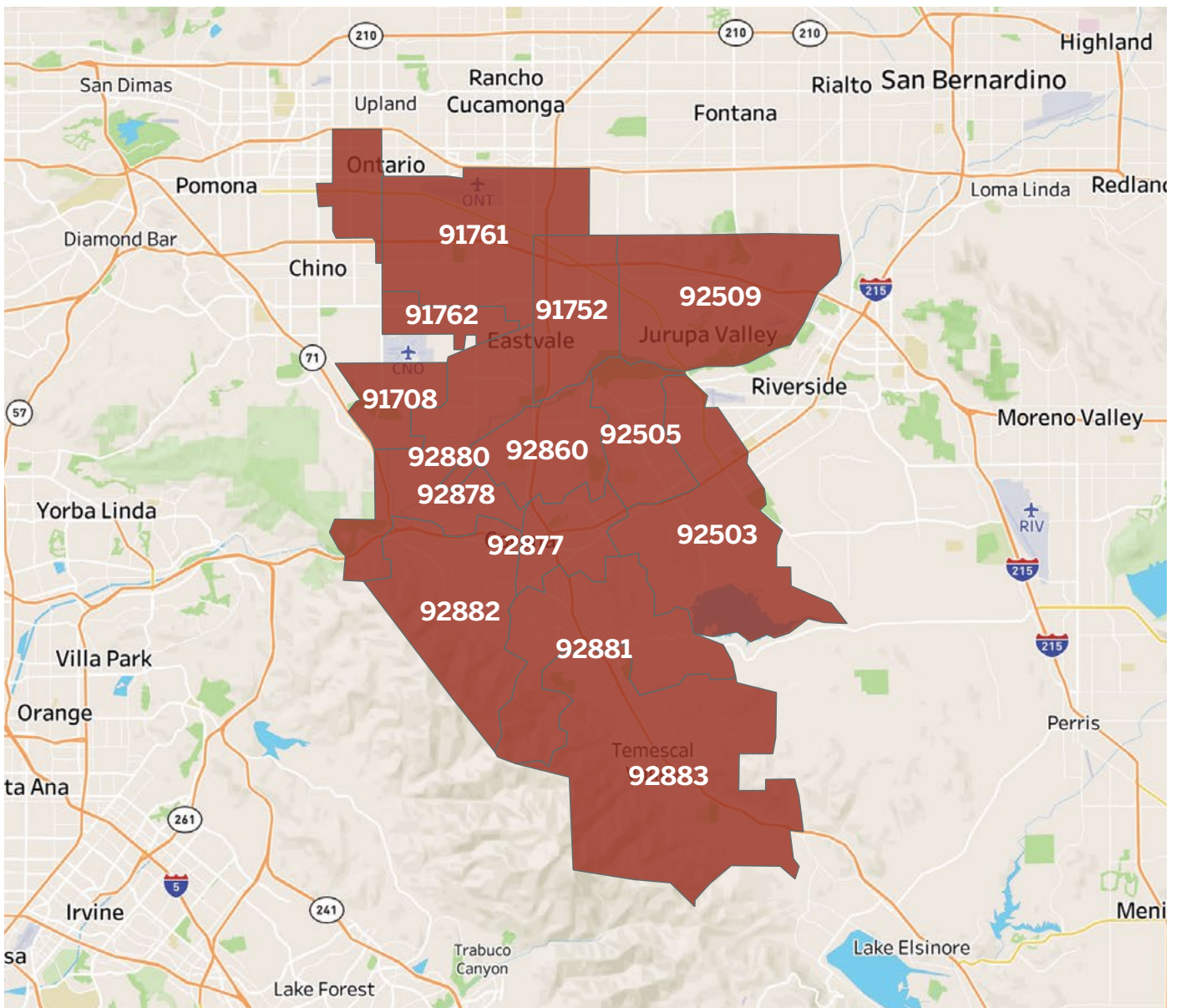
INTRODUCTION

Situated in the Inland Empire subregion of the Inland Empire/Desert Region, Norco College serves the cities and communities of Chino, Corona, Jurupa Valley, Mira Loma, Norco, Ontario, and Riverside (Exhibit 1). The college has a physical campus location in Norco.

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

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

Exhibit 1: Area served by Norco College



Source: Emsi, Tableau

METHODOLOGY

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

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

The 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

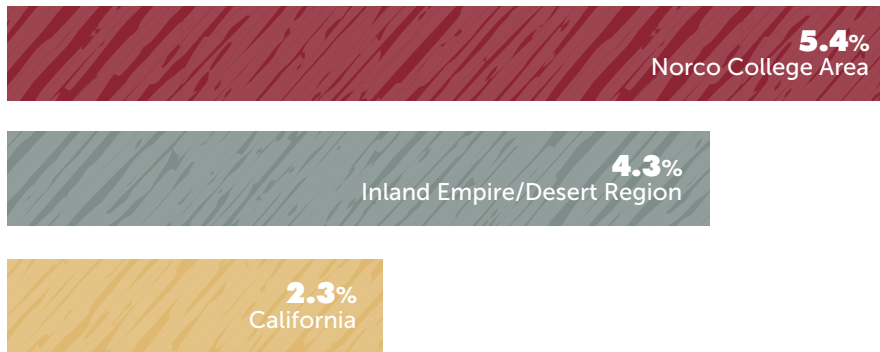
This section analyzes the demographic characteristics of the Norco College area, including population count, gender, race/ethnicity, age, and educational attainment. Understanding the local area’s composition is essential to ensure the college is serving its population and undertaking appropriate planning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

Resident Population

The Norco College area is home to 710,187 residents or approximately 15.2% of the Inland Empire/Desert Region, containing 4,672,608 residents. Norco is the 262nd largest city in California with an estimated population of 26,426 residents in 2019. The college serves portions of Riverside (326,427 residents) and Ontario (180,494 residents), which are the 11th and 24th (respectively) largest cities in the state. Corona is the 30th most populous city in the college area with 166,723 residents in 2019, according to the California Department of Finance.

Over the five-year period between 2019 and 2024, the college area’s population is projected to increase by 5.4%, adding 38,637 residents (Exhibit 2). Population growth in the college area is projected to increase faster than the region, 4.3%, and state, 2.3%, over the same five-year timeframe.

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

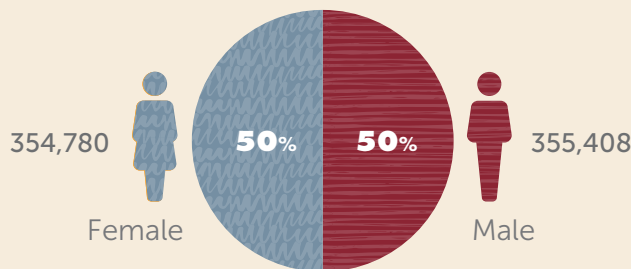


Source: Emsi 20.2

Resident Gender

The Norco College area has an equal proportion of males and females (Exhibit 3). Gender figures for the Inland Empire/Desert Region are available in Appendix B.

Exhibit 3: 2019 gender population share, Norco College area

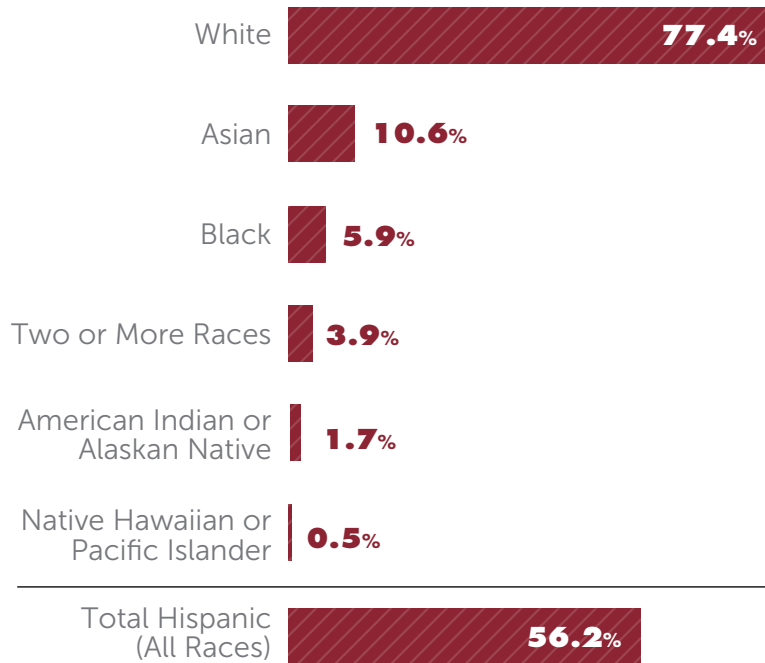


Source: Emsi 20.2

Race and Ethnicity

White residents make up about 77% of the population in the Norco College area and 78% of Inland Empire/Desert Region as a whole (Exhibit 4). There is a larger share of Hispanic residents in the Norco College area, 56% versus 52% in the Inland Empire/Desert Region. Race and ethnicity figures and percentages for the Inland Empire/Desert Region are available in Appendix B.

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



Source: Emsi 20.2



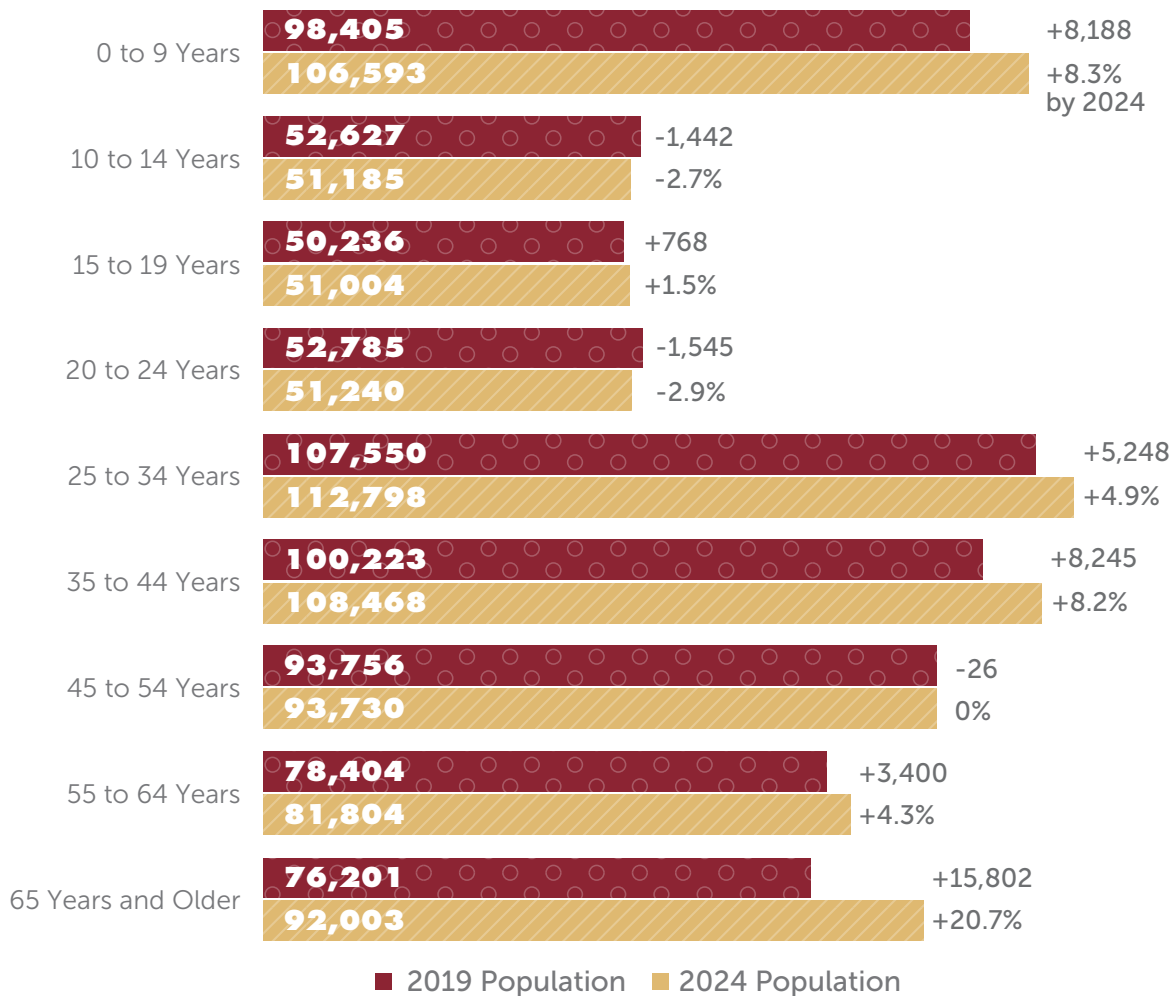
Age

Information on the age of residents helps determine future enrollment needs in the Norco College area. In 2019, residents age 9 and younger represented about 13.9% of the Norco College area’s population (Exhibit 5). This group is expected to increase by 8.3% by 2024, faster than the overall population at 5.4%. 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 2.7% over the next five years. The 15-to-19-year-old age group, representing high school students and recent graduates, represents 7.1% of the college area population. Growth in this group is expected to increase by 1.5% over the next five years.

The working-age population, residents ages 25 to 64 years, represented 53.5% of the area’s population in 2019. Over the next five years, the working-age population is expected to grow by 4.4%, adding 16,867 residents.

The 65-years-and-older age group is projected to increase by 20.7% over the next five years, adding 15,802 residents. This age group is projected to grow almost four times faster than the college area population as a whole. Age categories and shares for the Inland Empire/Desert Region are available in Appendix B.

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

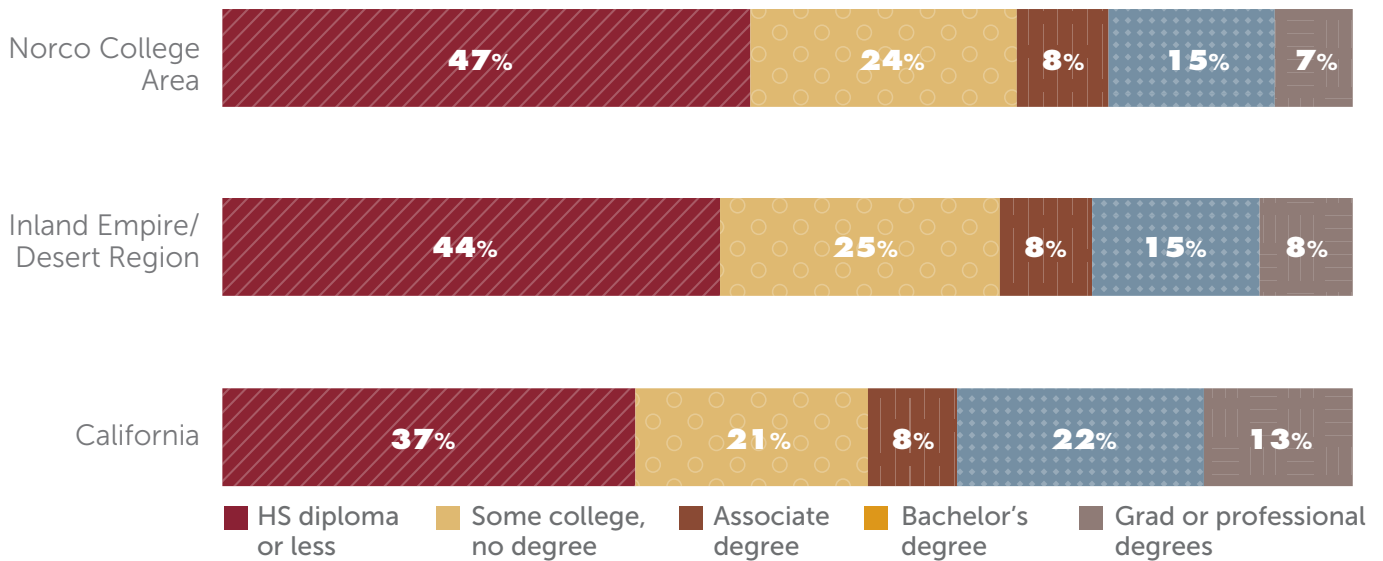


Source: Emsi 20.2

Educational Attainment

Educational attainment refers to the highest level of education that residents age 25 and older have completed. About half of residents (47%) in the Norco College area have a high school diploma or less, a percentage higher than the region (44%), and considerably higher than California (37%) (Exhibit 6). The Norco College area and the region have a comparable share of residents who have some level of community college education (having completed some college, no degree or an associate degree). In the Norco College area, the percentage is 32% and 33% in the region. The share of residents in the Norco College area with a bachelor's degree or higher (22%) is slightly lower than the Inland Empire/Desert Region (23%), and considerably lower than the state overall (35%), representing an opportunity to increase educational attainment in the area.

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



Source: American Community Survey

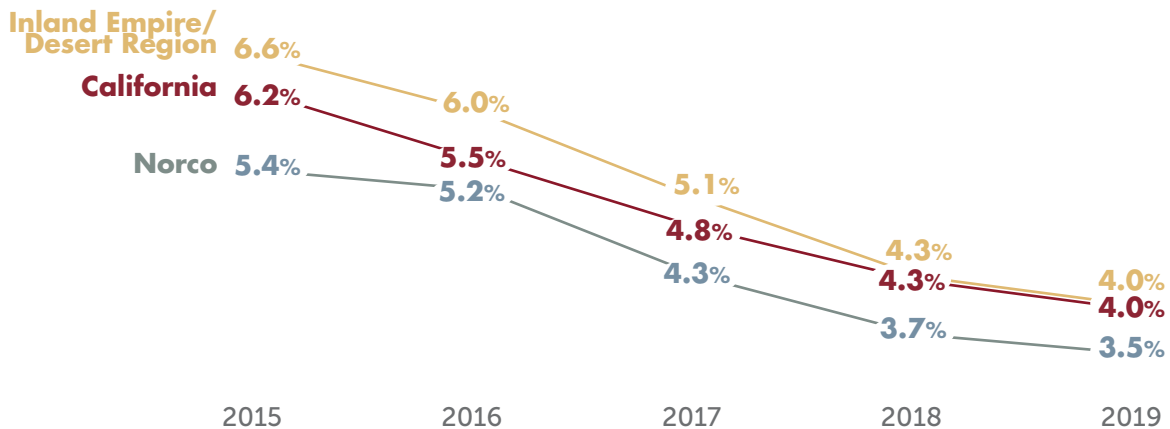


Labor Force and Unemployment Rate

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

In 2015, the annual average unemployment rate in Norco city was 5.4%, the equivalent of 600 unemployed residents. By 2019, the unemployment rate fell to 3.5%, with the number of unemployed residents dropping to 400.

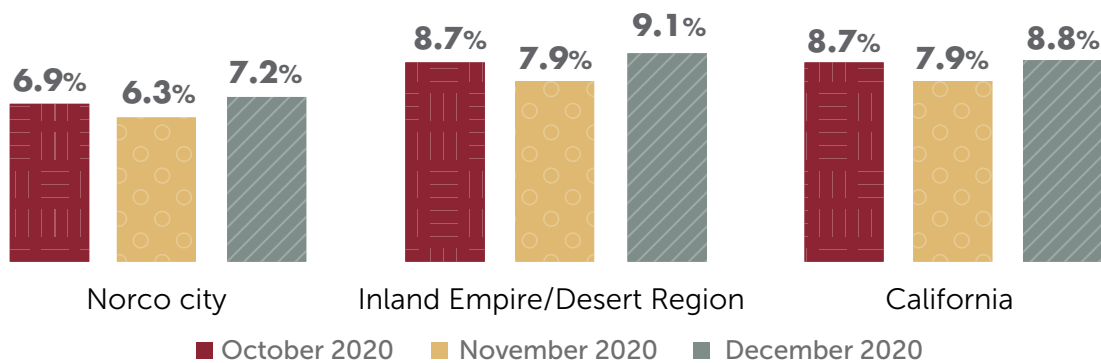
Exhibit 7: Annual average unemployment rate in Norco city, the Inland Empire/Desert Region, and California (in percent)



Source: California Employment Development Department, Labor Market Information Division

The COVID-19 pandemic and subsequent economic shutdown in March 2020 resulted in a dramatic spike in the unemployment rate. Exhibit 8 displays the current unemployment rate for Norco city, the Inland Empire/Desert Region, and California from October 2020 through December 2020. The current unemployment rates for other communities in the Norco College area are available in Appendix B.

Exhibit 8: Unemployment rate in Norco city, Inland Empire/Desert Region, and California, October-December 2020



Source: California Employment Development Department, Labor Market Information Division

INDUSTRY EMPLOYMENT AND BUSINESS ACTIVITY

In 2019, there were 346,435 jobs in the Norco College area, accounting for approximately 20% of total regional employment (Exhibit 9). Over the next five years, employment in the Norco College area is projected to grow by 10.2%, adding 35,229 jobs by 2024. Norco College area job growth is projected to increase faster than the region, 8.4%, and the state overall, 6%.

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

	College area	Inland Empire/ Desert Region	California
2019 Jobs	346,435	1,747,341	20,003,848
2024 Jobs	381,664	1,893,522	21,200,103
Jobs Change	35,229	146,181	1,196,255
2019-2024 % Change	10.2%	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). The five largest industries by job count in the Norco College area collectively accounted for 57.7% of the total jobs in 2019:

- Transportation and warehousing (45,013 jobs)
- Health care and social assistance (40,858 jobs)
- Construction (39,034 jobs)
- Government (38,026 jobs)
- Manufacturing (37,156 jobs)

The industries projected to add the most jobs through 2024 are:

- Health care and social assistance (9,975 jobs, 24.4% growth)
- Transportation and warehousing (8,207 jobs, 18.2% growth)
- Construction (4,654 jobs, 11.9% growth)
- Accommodation and food services (2,935 jobs, 13.7% growth)
- Government (2,171 jobs, 5.7% growth)
- Administrative and support and waste management and remediation services (2,032 jobs, 6.5% growth)

These six industries combined will contribute 85% of the job growth to the college area over the next five years.

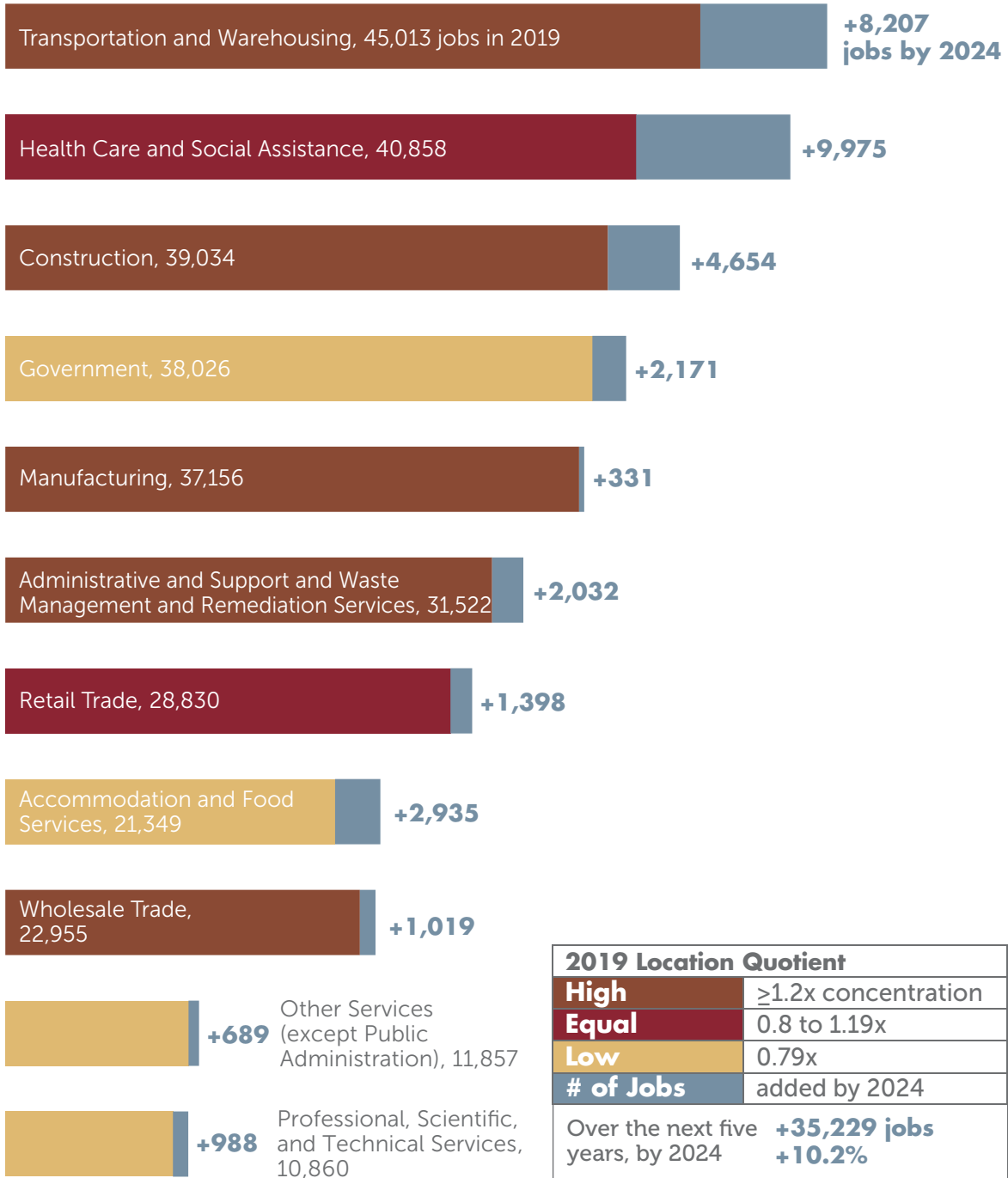
Exhibit 10 also displays the 2019 location quotient for each major industry in the college service area, which quantifies each industry’s concentration in the regional economy compared to the nation. A high location quotient (1.2 or greater) indicates an industry is particularly important to the local 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 three top industries in terms of overall employment also have industry concentrations that are equal or greater to the national average, representing 36% of total jobs in the area (124,905 jobs out of 346,435 total jobs). These three industries are transportation and warehousing, health care and social assistance, and construction.

Major industry groups with fewer than 10,000 jobs, along with key industry terms, are displayed in Appendix C.

Exhibit 10: Major industries in the Norco 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 NORCO COLLEGE AREA

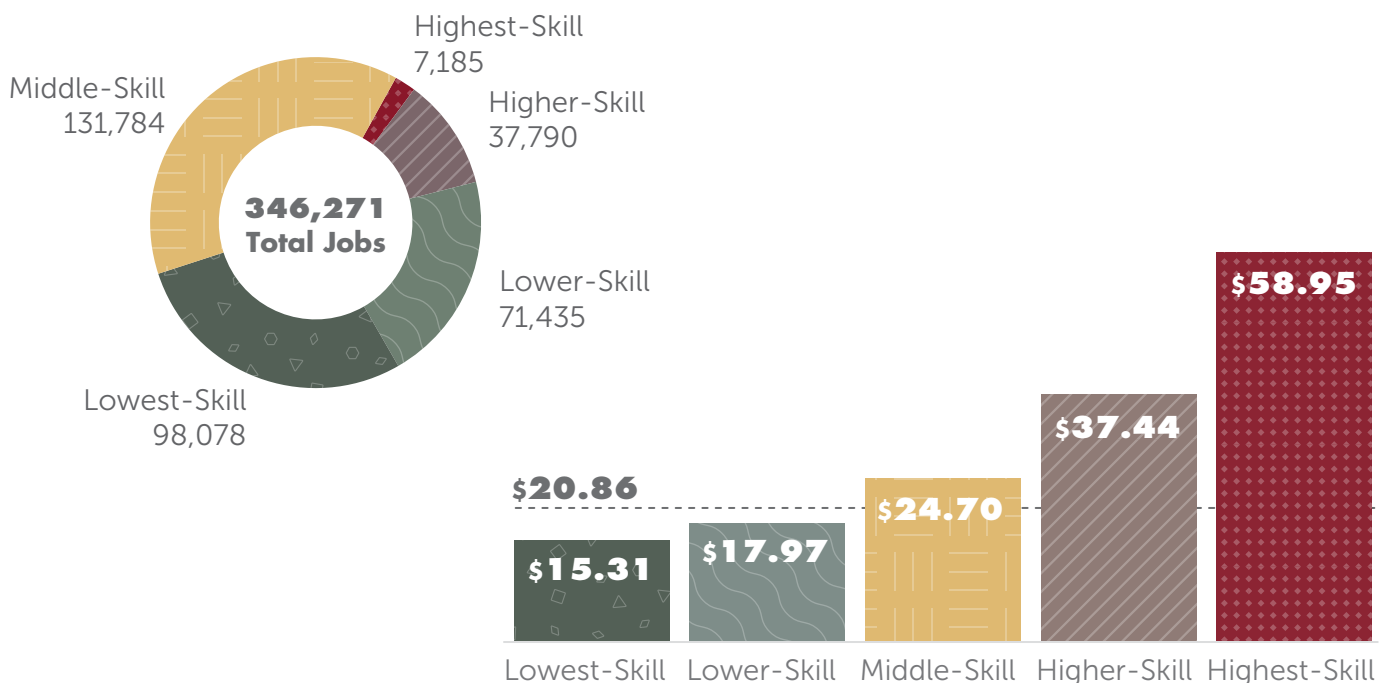
Occupational employment in the Norco College area was analyzed in terms of skill level. The California Community Colleges provide education and training that generally prepares students to enter middle-skill jobs. Middle-skill occupations typically require educational attainment beyond a high school 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. Definitions for each occupational skill level are available in Appendix C.

To further refine the types of job openings available in the Norco College area, military-specific occupations in the Norco College area were removed from further analysis (-164 jobs). Of the 346,271 jobs in the Norco College area in 2019, approximately 38% were classified as middle-skill, 28% were lowest-skill, 21% were lower-skill, 11% were higher-skill, and 2% were highest-skill (Exhibit 11). Through 2024, 49,898 job openings are projected to fill newly created positions as well as existing jobs that workers are permanently vacating (due to occupational transfers and retirements). While the majority of these opportunities will be in lower-skill and lowest-skill occupations, 17,004 middle-skill openings are expected annually in the Norco College area through 2024.

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

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



Source: COE, Emsi 20.2

NORCO COLLEGE PROGRAM OFFERINGS BY CAREER EDUCATION INDUSTRY SECTOR

The California Department of Education (CDE) developed CE Model Curriculum Standards for grades 7 through 12 that categorize courses and programs into 15 sectors. The CE model sectors are not to be confused with the NAICS employment sectors 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.

Norco College currently offers programs within 10 CDE sectors:

- Arts, Media, and Entertainment
- Building and Construction Trades
- Business and Finance
- Education, Child Development, and Family Services
- Engineering and Architecture
- Information and Communications Technologies
- Manufacturing and Product Development
- Marketing, Sales, and Services
- Public Service
- Transportation

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 Norco College does not currently offer training for are provided at the end of each sector or pathway section. 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 key terms, as well as annual job openings and in-depth wage categories for each occupation in the Norco College area and Inland Empire/Desert Region.

This analysis details employment opportunities for **82 unique occupations**, yielding **7,641 annual job openings** within the Norco College area. Nearly 70% of these job opportunities are middle-skill, totaling 5,288 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 Norco College area for which there are currently no relevant training programs being offered. With the appropriate level of education and training, the Norco College area's resident population could potentially explore an additional 7,273 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 pathway includes those occupations that use visual art, digital media, and web-based tools and materials as the primary means of communication and expression. This career pathway requires the development of knowledge and skills in both visual art concepts as well as new and emerging digital processes by which individuals are able to create and communicate complex concepts in a broad range of occupations and professions.

Norco College programs:

- Graphic Design
- Game Development Core
- Game Concept Art
- 3D Game Modeling & Animation

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

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Graphic Designers	511	60	255	\$20.71
Multimedia Artists and Animators	56	7	36	\$15.36
Desktop Publishers	8	1	7	\$20.25

Exhibit 13: Design, visual, and media arts higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Art Directors	119	16	100	\$24.62
Proofreaders and Copy Markers	10	2	8	\$18.30

Performing Arts Pathway

Performing arts programs prepare students for the direct creation of art and entertainment by individual artists instead of through a secondary physical medium. Performing artists are themselves the medium of creative expression.

Norco College programs:

- Music Industry Studies: Audio Production
- Music Industry Studies: Performance

Exhibit 14: Performing arts middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Audio and Video Equipment Technicians	100	14	87	\$18.65
Sound Engineering Technicians	21	3	17	\$15.10

Exhibit 15: Performing arts higher-skill occupation

Higher-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Music Directors and Composers	65	8	85	\$22.59





BUILDING AND CONSTRUCTION TRADES INDUSTRY SECTOR

Programs related to this sector provide a foundation in building and construction trades with an emphasis on processes and systems for how things are built. Students learn using hands-on, project-based, and work-based practices. Pathways include cabinetry, millwork, and woodworking; engineering and heavy construction; mechanical systems installation and repair; and residential and commercial construction.

Residential and Commercial Construction Pathway

This pathway is geared toward students who have an interest in construction and building design, performance, and sustainability. Students learn about building standards, and how residential and commercial structures are designed and built. In the Norco College area, five middle-skill occupations are projected to provide 770 annual job openings over the next five years.

Norco College programs:

- Construction Management
- Construction Technology
- Electrician
- Electrician Apprenticeship
- Green Technician
- Sound and Communication System Installer Apprenticeship

Exhibit 16: Residential and commercial construction middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Electricians	2,155	340	1,365	\$24.28
First-Line Supervisors of Construction Trades and Extraction Workers	2,052	273	1,000	\$32.24
First-Line Supervisors of Mechanics, Installers, and Repairers	948	111	500	\$33.91
Construction and Building Inspectors	214	31	164	\$40.80
Solar Photovoltaic Installers	73	15	52	\$19.15

Additional Building and Construction Trades Training Opportunities

Aside from the programs listed above, there are other building and construction trades program opportunities that Norco College may choose to offer training for, as these occupations have a significant number of annual openings in the college service area and the region. Additional building and construction trades occupations will offer a total of 1,463 annual openings in the college area and 5,223 annual openings in the region.

Exhibit 17: Building and construction trades training opportunities

Building and Construction Trades Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Carpenters	5,720	724	2,591	\$22.93
Plumbers, Pipefitters, and Steamfitters	1,773	276	983	\$24.48
Operating Engineers and Other Construction Equipment Operators	1,178	167	554	\$38.15
Sheet Metal Workers	559	79	261	\$24.15
Structural Iron and Steel Workers	467	74	237	\$32.33
Civil Engineers (Higher-skill)	581	59	285	\$52.01
Glaziers	249	39	125	\$29.05
Brickmasons and Blockmasons	293	33	120	\$24.57
Civil Engineering Technicians	98	12	67	\$29.74





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. Programs in this sector prepare students for employment in 19 middle-skill and higher-skill occupations with a combined total of 2,778 annual job openings.

Business Management Pathway

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.

Norco College programs:

- Business Administration: General Business
- Business Administration: Management
- Business Information Worker
- Entrepreneurship: Getting Started

Exhibit 18: Business management middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	4,185	508	2,760	\$18.58
First-Line Supervisors of Office and Administrative Support Workers	2,942	364	1,750	\$26.41
Executive Secretaries and Executive Administrative Assistants	647	73	397	\$28.13
Data Entry Keyers	389	45	199	\$15.26

Exhibit 19: 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	4,319	489	2,162	\$48.54
Managers, All Other	2,144	199	920	\$34.61
Management Analysts	1,141	128	679	\$37.83
Administrative Services Managers	471	51	259	\$47.33
Chief Executives	558	44	204	\$78.12

Financial Services Pathway

Students participating in these programs will gain knowledge of industry standards, financial services skills, and the ability to formulate and interpret financial information. There are employment opportunities in the college service area for those completing a community college education as well as those who obtain a bachelor’s degree. There are considerably more job openings in the Inland Empire/Desert Region than in the Norco College area. This pathway trains students to enter 10 middle-skill and higher-skill occupations that have a combined total of 877 annual job openings in the Norco College area.

Norco College programs:

- Business Administration: Accounting
- Entrepreneurship: Legal and Finance
- Registered and Small Business Income Tax Preparer
- Small Business Accounting
- Small Business Payroll Accounting

Exhibit 20: Financial services middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Bookkeeping, Accounting, and Auditing Clerks	3,310	427	2,079	\$19.60
Bill and Account Collectors	507	65	261	\$18.60
Payroll and Timekeeping Clerks	414	49	238	\$22.56
Tax Preparers	154	19	123	\$16.73

Exhibit 21: Financial services higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Accountants and Auditors	1,583	178	934	\$33.75
Financial Managers	828	84	421	\$53.14
Personal Financial Advisors	186	16	122	\$36.52
Financial Analysts	175	18	89	\$37.97
Financial Specialists, All Other	149	15	99	\$25.03
Budget Analysts	67	6	37	\$33.17

Additional Business and Finance Training Opportunities

Future program development by Norco College may focus on the following occupations related to business and finance. Additional business and finance occupations will offer a total of 624 annual openings in the college area and 3,116 annual openings in the region.

Exhibit 22: 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
Business Operations Specialists, All Other	1,853	218	1,143	\$31.18
Human Resources Specialists (Higher-skill)	983	122	607	\$29.60
Buyers and Purchasing Agents	1,039	113	426	\$27.40
Training and Development Specialists	424	59	290	\$27.60
Compliance Officers (Higher-skill)	451	48	274	\$35.37
Loan Officers (Higher-skill)	383	35	224	\$26.98
Human Resources Managers (Higher-skill)	267	29	152	\$54.47





EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES SECTOR

Education and training in this sector provide students with the skills needed to pursue a career in childcare, family, social services, or teaching (McCabe & Page). Students enrolled in these programs will be qualified to enter the occupations listed below, many of which are higher-skill and in demand.

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 12 occupations that have a combined total of 1,577 annual job openings. Most job opportunities in this pathway are higher-skill occupations.

Norco College programs:

- Early Childhood Education
- Early Childhood Intervention Assistant
- Early Childhood Education/Assistant Teacher
- Early Childhood Education Twelve Core Units

Exhibit 23: Child development and education middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Teacher Assistants	3,114	380	2,469	\$16.84
Childcare Workers	1,912	286	2,008	\$12.04
Preschool Teachers, Except Special Education	498	56	413	\$14.36
Special Education Teachers, Preschool	86	9	51	\$12.07

Exhibit 24: 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	3,422	309	1,962	\$42.88
Substitute Teachers	2,318	296	1,788	\$18.05
Teachers and Instructors, All Other	622	87	615	\$16.79
Middle School Teachers, Except Special and Career/Technical Education	530	55	352	\$39.99
Child, Family, and School Social Workers	276	38	234	\$25.85
Special Education Teachers, Kindergarten and Elementary School	346	32	203	\$37.82
Kindergarten Teachers, Except Special Education	184	22	144	\$34.17
Special Education Teachers, Middle School	68	7	46	\$38.72

Additional Education, Child Development, and Family Services Training Opportunities

Future program development by Norco College may focus on the following education, child development, and family services occupations. Additional education, child development, and family services occupations will offer a total of 302 annual openings in the college area and 1,825 annual openings in the region. All five occupations are higher-skill.

Exhibit 25: Education, child development, and family services training opportunities

Education, Child Development, and Family Services Training Opportunities, All Higher-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Secondary School Teachers, Except Special and Career/Technical Education	1,829	163	1,034	\$40.49
Social Workers, All Other	345	44	263	\$33.84
Social and Community Service Managers	321	49	249	\$30.62
Community and Social Service Specialists, All Other	190	28	165	\$23.93
Special Education Teachers, Secondary School	187	18	114	\$43.18





ENGINEERING AND ARCHITECTURE SECTOR

Programs in engineering and architecture pathways integrate academic and technical preparation, and focus on career awareness, career exploration, and career preparation. Four pathways emphasize real-world, occupationally relevant experiences of significant scope and depth: architectural design; engineering technology; engineering design; and environmental engineering (McCabe & Page).

Architectural Design Pathway

This pathway introduces students to skills required in architectural careers. With additional education through a four-year college or university, students can be prepared to enter architecture and engineering careers.

Norco College programs:

- Architectural Graphics
- Drafting Technology

Exhibit 26: Architectural design middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Architectural and Civil Drafters	202	26	123	\$27.44
Drafters, All Other	50	6	21	\$20.09

Exhibit 27: Architectural design higher-skill occupation

Higher-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Architects, Except Landscape and Naval	182	19	102	\$35.82

Engineering Design Pathway

The engineering design pathway exposes students to careers in the design and production of mechanical, electrical, and computer systems. Similar to the architectural design pathway, this pathway also prepares students for education at a four-year college or university to pursue employment as an engineer.

Norco College programs:

- Engineering Graphics

Exhibit 28: Engineering design middle-skill occupation

Middle-skill Occupation	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Engineering Technicians, Except Drafters, All Other	212	22	86	\$34.76

Exhibit 29: Engineering design higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Architectural and Engineering Managers	317	28	101	\$70.20
Engineers, All Other	178	15	64	\$45.24





INFORMATION AND COMMUNICATION TECHNOLOGIES SECTOR

Programs related to information and communication technologies prepare students to meet the rapid changes in computer, networking, and software fields. Although employers in this sector often seek candidates with a bachelor's degree, job opportunities also exist for those with a community college education (McCabe & Page). Programs related to this pathway address information support and services; networking, software, and systems development; and game and simulation.

Software and Systems Development Pathway

This pathway prepares students to enter computer science jobs that design and develop software systems to maintain the operations of an organization.

Norco College programs:

- Computer Programming
- C++ Programming
- Game Programming
- Java Programming

Exhibit 30: 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	249	26	109	\$24.36

Exhibit 31: 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	491	56	237	\$48.70
Software Developers, Systems Software	357	34	118	\$48.83
Computer Programmers	228	18	72	\$40.36

Additional Information and Communication Technologies Training Opportunities

Future program development by Norco College may focus on the following information and communication technologies occupations. These information and communication technologies occupations will offer a total of 209 annual openings in the college area and 994 annual openings in the region. Two of the five occupations are higher-skill.

Exhibit 32: Information and communication technologies training opportunities

Information and Communication Technologies Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Computer User Support Specialists	717	77	390	\$26.11
Computer Systems Analysts (Higher-skill)	439	42	186	\$39.87
Network and Computer Systems Administrators	377	34	158	\$38.48
Computer and Information Systems Managers (Higher-skill)	313	33	152	\$68.15
Computer Network Support Specialists	220	23	108	\$28.00



MANUFACTURING AND PRODUCT DEVELOPMENT SECTOR

Coursework related to the Manufacturing and Product Development CDE sector provides a foundation in manufacturing processes and systems, including graphic design production, machine tooling and forming, welding and materials joining, and product innovation and design. Students can explore this sector through four pathways: graphic production technologies; machining and forming technologies; welding and materials joining; and product innovation and design.

Machining and Forming Technologies Pathway

The Machining and Forming Technologies pathway provides students with education and training for occupations related to machine tools and manufacturing processes. The machining and forming technologies programs prepare students to enter three middle-skill occupations with a combined total of 234 annual job openings in the Norco College area.

Norco College programs:

- Conventional Machine Operator
- Computerized Numerical Control (CNC) Operator
- Computer Numerical Control Programming
- Conventional Machine Operator

Exhibit 33: Machining and forming technologies middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Machinists	1,476	175	411	\$19.27
Computer-Controlled Machine Tool Operators, Metal and Plastic	410	46	102	\$17.92
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	93	13	29	\$29.07

Product Innovation and Design Pathway

The product innovation and design pathway provides students with an understanding of the design and manufacturing technologies common to careers in the fields of product design and manufacturing (McCabe & Page).

Norco College programs:

- 3D Mechanical Drafting
- Apprenticeship: Manufacturing Technician 1
- Apprenticeship: Manufacturing Technician 2
- Digital Electronics
- Facility Maintenance
- Industrial Automation
- Supply Chain Automation

Exhibit 34: Product innovation and design middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Maintenance and Repair Workers, General	2,390	296	1,684	\$19.84
First-Line Supervisors of Production and Operating Workers	1,652	193	589	\$28.35
Industrial Machinery Mechanics	822	92	301	\$27.95
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	645	76	230	\$15.08
Electrical and Electronics Drafters	67	8	33	\$29.00
Electrical and Electronics Engineering Technicians	251	27	107	\$29.45
Electrical and Electronics Repairers, Commercial and Industrial Equipment	160	16	70	\$31.82
Industrial Engineering Technicians	156	17	48	\$29.48
Mechanical Drafters	151	17	53	\$24.37
Mechanical Engineering Technicians	53	6	19	\$21.06

Exhibit 35: Product innovation and design higher-skill occupations

Higher-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Industrial Engineers	495	44	119	\$38.44
Mechanical Engineers	453	39	123	\$40.53

Additional Manufacturing and Product Development Training Opportunities

Future program development by Norco College may focus on programs related to the occupation of industrial production managers, which is projected to offer 47 annual job openings in the college area and 132 annual job openings in the region.

Exhibit 36: Manufacturing and product development training opportunities

Manufacturing and Product Development Training Opportunities, Middle-skill	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Industrial Production Managers	539	47	132	\$47.52



MARKETING, SALES, AND SERVICES SECTOR

There are three pathways related to this sector: marketing, professional sales, and entrepreneurship/self-employment. Course work is designed to align with career path into current and projected employment opportunities. Students learn skills related to communication, operating a small business, self-employment, advertising, marketing strategies, product and service management, and promotion and selling concepts (McCabe & Page).

Professional Sales Pathway

This pathway provides the knowledge, skills, and abilities for a career selling products, developing sales goals, and interacting and understanding consumer behavior. Within this pathway, Norco College’s business administration program focuses on real estate.

Norco College programs:

- Business Administration: Real Estate
- Real Estate Salesperson and Transaction
- Retail Management/WAFC (Western Association of Food Chains)

Exhibit 37: Professional sales middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
First-Line Supervisors of Retail Sales Workers	2,556	312	1,981	\$19.24
Real Estate Sales Agents	531	54	476	\$26.42
Property, Real Estate, and Community Association Managers	361	31	289	\$30.43
Real Estate Brokers	182	18	168	\$37.66
Appraisers and Assessors of Real Estate	100	8	64	\$28.30

Additional Marketing, Sales, and Service Training Opportunities

Future program development by Norco College may focus on programs related to occupations that involve other aspects of professional sales and marketing. Additional marketing, sales, and services occupations will offer a total of 1,384 annual openings in the college area and 5,242 annual openings in the region. Five of the eight occupations are higher-skill.

Exhibit 38: Marketing, sales, and services training opportunities

Marketing, Sales, and Services Training Opportunities, Middle-skill, unless noted	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	4,792	568	1,777	\$27.77
Sales Representatives, Services, All Other	2,145	333	1,437	\$22.92
Sales Managers (Higher-skill)	1,375	140	559	\$43.00
First-Line Supervisors of Non-Retail Sales Workers	969	100	402	\$24.90
Market Research Analysts and Marketing Specialists (Higher-skill)	957	129	591	\$26.18
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products (Higher-skill)	473	54	169	\$34.64
Marketing Managers (Higher-skill)	268	30	130	\$48.04
Public Relations Specialists (Higher-skill)	219	30	177	\$29.25





PUBLIC SERVICES SECTOR

Public services coursework includes public safety, emergency response, and legal practices (McCabe & Beck). Three pathways comprise this sector: public safety, emergency response, and legal practices. Public services programs train students to enter two middle-skills occupations with a combined total of 20 annual job openings in the college area. There is an opportunity to access an additional 293 middle-skill openings per year by expanding program offerings in this sector.

Public Safety Pathway

The public safety pathway is designed for students pursuing a career in law enforcement or public safety. Norco College's crime scene investigation program prepares students to enter employment in two occupations with a combined total of 20 annual job openings in the Norco College area.

Norco College programs:

- Crime Scene Investigation

Exhibit 39: Public safety middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
Detectives and Criminal Investigators	157	12	85	\$49.12
Forensic Science Technicians	52	8	45	\$35.39

Additional Public Services Training Opportunities

Future program development by Norco College may focus on the following occupations related to public safety, emergency response, and legal practices. Additional public services occupations will offer a total of 391 annual openings in the college area and 2,531 annual openings in the region. Two of the eight occupations are higher-skill.

Exhibit 40: Public services training opportunities

Public Services 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	1,117	98	628	\$47.03
Correctional Officers and Jailers	802	74	463	\$38.33
Firefighters	528	48	269	\$30.40
Substance Abuse, Behavioral Disorder, and Mental Health Counselors (Higher-skill)	522	78	532	\$21.24
Paralegals and Legal Assistants	256	36	262	\$27.46
Probation Officers and Correctional Treatment Specialists (Higher-skill)	205	20	125	\$38.66
Legal Secretaries	187	21	152	\$25.39
Interpreters and Translators	116	16	100	\$26.11



TRANSPORTATION SECTOR

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

Operations Pathway

The operations pathway prepares students for various careers that support the movement of goods in the transportation industry. Norco College offers two programs in this pathway that prepare students to enter six related occupations with a combined total of 647 annual job openings in the Norco College area.

Norco College programs:

- Business Administration: Logistics Management
- Logistics Management

Exhibit 41: Operations middle-skill occupations

Middle-skill Occupations	College Area 2019 Jobs	College Area Annual Job Openings	Regional Annual Job Openings	Regional Median Wage
First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	2,282	339	1,134	\$27.19
Production, Planning, and Expediting Clerks	1,133	150	537	\$22.06
Transportation, Storage, and Distribution Managers	676	78	279	\$41.71
Cargo and Freight Agents	302	57	123	\$23.15
Procurement Clerks	130	16	67	\$22.27
Aircraft Cargo Handling Supervisors	50	7	15	\$17.69

Additional Transportation Sector Training Opportunities

Future program development by Norco College may focus on training related to the systems diagnostic, service, and repair and structural repair and refinishing pathways. Additional transportation occupations will offer a total of 1,488 annual openings in the college area and 5,303 annual openings in the region. All four occupations are middle-skill.

Exhibit 42: Transportation training opportunities

Transportation Training Opportunities, Middle-skill	College Area 2019 Jobs	College Annual Openings	Regional Annual Openings	Median Hourly Earnings
Heavy and Tractor-Trailer Truck Drivers	8,801	1,247	4,395	\$21.57
Bus and Truck Mechanics and Diesel Engine Specialists	1,013	121	483	\$24.05
Mobile Heavy Equipment Mechanics, Except Engines	538	65	240	\$30.12
Aircraft Mechanics and Service Technicians	520	55	185	\$34.63

ADDITIONAL CDE SECTORS AND CAREER OPPORTUNITIES

There are four CDE sectors for which Norco 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. Norco College may choose to consider training for these occupations as the college expands its CE offerings.

Agriculture and Natural Resources Sector

Agriculture and natural resources students acquire foundational skills and knowledge in agricultural business, mechanics, science, and animal care (Heuvel & Mooney). This sector will offer 69 annual job openings in the college area and 497 annual job openings in the region.

Exhibit 43: 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	500	62	267	\$22.64
Farmers, Ranchers, and Other Agricultural Managers	84	7	230	\$21.41

Energy, Environment, and Utilities Sector

Students enrolled in coursework related to the energy, environment, and utilities sector acquire foundational skills in environmental resources, energy and power technology, and telecommunications (McCabe & Yates). This sector will offer 229 annual job openings in the college area and 876 annual job openings in the region.

Exhibit 44: 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	847	103	403	\$26.71
Telecommunications Line Installers and Repairers	397	56	179	\$25.59
Electrical Power-Line Installers and Repairers	373	44	148	\$35.93
Water and Wastewater Treatment Plant and System Operators	278	26	146	\$32.87

Fashion and Interior Design Sector

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

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

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. This sector will offer 920 annual job openings in the college area and 5,275 annual job openings in the region. Eleven of the 12 occupations listed below are middle-skill.

Exhibit 45: 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
Registered Nurses	4,906	470	2,616	\$47.45
Licensed Vocational Nurses	1,239	140	809	\$25.10
Medical and Health Services Managers (Higher-skill)	511	73	401	\$56.33
Medical Records and Health Information Technicians	331	32	184	\$22.44
Clinical Laboratory Technologists and Technicians	285	33	194	\$24.72
Radiologic Technologists	269	28	140	\$36.03
Dental Hygienists	267	30	186	\$45.41
Respiratory Therapists	255	23	150	\$35.39
Healthcare Support Workers, All Other	229	32	208	\$21.26
Surgical Technologists	197	29	135	\$27.39
Psychiatric Technicians	157	17	149	\$34.62
Physical Therapist Assistants	65	13	103	\$34.61

Hospitality, Tourism, and Recreation Sector

Coursework aligned with this CDE sector prepares students to enter food service, recreation, and hospitality employment (Heuvel & Wright). Three occupations in this sector will offer 147 annual job openings in the college area and 924 annual job openings in the region. Two of the three occupations are middle-skill.

Exhibit 46: 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	750	102	653	\$20.87
First-Line Supervisors of Gaming Workers	203	24	146	\$27.77
Meeting, Convention, and Event Planners (Higher-skill)	135	21	125	\$22.96

KEY FINDINGS AND RECOMMENDATIONS

Key findings

The Norco College area contained 15% of the region's population in 2019 and is projected to add 38,637 new residents by 2024, growing by 5.4%. Population growth in the college area is expected to outpace the region, which has a projected growth rate of 4.3%, and the state, which has a 2.3% projected growth rate. Residents age 65 and older comprise the fastest growing age group in the college area, accounting for more than 40% of the college area's population growth, the equivalent of adding 15,802 new residents over the next five years. The increase in this age group may indicate an increased need for health care services to care for an aging population. Projected growth in the number of residents age 9 and younger in the college area represents a significant portion of the college's future student pipeline. This age group is expected to increase by 8.8% over the next five years, the equivalent of adding 8,188 new residents. This projected growth presents an opportunity for targeted outreach and communication about the college's program offerings in the next seven to 10 years, especially within the local K-12 education system.

In the Norco College area, 32% of residents are community college educated, having completed some college, no degree, or an associate degree. This percentage is nearly equal to the percentage of community college educated residents in the region, 33%. The percentage of residents with a bachelor's degree or higher in the college area, 22%, is also comparable to the region, 23%, but is far lower than the state, 35%. The proportion of residents with a high school diploma or less, 47%, is a relatively substantial population share in the college area, indicating the college area lags behind the region and state in terms of educational attainment. Norco College is uniquely positioned to offer programs that will address employer demand for middle-skill job growth and has the opportunity to create transfer programs to four-year colleges and universities to improve educational attainment in its service area.

Norco College currently offers programs related to 10 CDE sectors. The 10 sectors with related programs account for 7,641 annual job openings in the college area. Four CDE sectors without existing programs account for 1,365 annual job openings.

Sectors with existing programs and their respective annual job openings for middle-skill only jobs in the college area (in descending order) are:

- Transportation, 1,488 annual job openings
- Building and Construction Trade, 1,463 annual job openings
- Marketing, Sales, and Services, 1,001 annual job openings
- Business and Finance, 390 annual job openings
- Public Services, 293 annual job openings
- Information and Communications Technologies, 134 annual job openings
- Manufacturing and Product Development, 47 annual job openings

Sectors with no existing programs but that demonstrate substantial workforce demand for middle-skill only jobs in the college area are:

- Health Science and Medical Technology, 847 annual job openings
- Energy, Environment, and Utilities, 229 annual job openings
- Hospitality, Tourism, and Recreation, 126 annual job openings
- Agriculture and Natural Resources, 69 annual job openings

Recommendations

There are multiple employment opportunities in the Norco College area with CE training requirements not currently addressed by the college's programs. Furthermore, several sectors for which the college has existing training programs include additional occupations for which training could be expanded. These areas warrant further exploration to determine if it is appropriate for the college to create new programs or expand existing ones. Further research would determine if programs exist at nearby community colleges, private postsecondary institutions, technical colleges, or through other training providers. A conversation with regional employers who hire for these occupations also could reveal the potential of additional community college training programs to meet current and future industry needs.

The three sectors with the most annual job openings in the college area are transportation; marketing, sales, and services; and health sciences. As a sector that already has existing programs at the college, the transportation sector represents many employment opportunities with high-wages for which programs could be created or expanded. Most of the job openings in this sector are for heavy and tractor-trailer truck drivers (1,247 annual job openings). However, if the college is not interested in starting a truck driving program, a program that addresses the bus and truck mechanic and diesel engine specialist occupation may be warranted. This repair occupation for heavy vehicles is expected to have 121 annual job openings and offers a median hourly wage of \$24.05 per hour in the college area.

Training related to the building and construction sector is another area the college may want to further develop. Construction industry employers are highly concentrated in the college area and are expected to add 4,654 jobs (representing 11.9% growth) over the next five years. Other occupations that are in demand and offer a high-wage in the college area are: carpenters (724 annual job openings, \$22.93 median hourly wage); plumbers, pipefitters, and steamfitters (276 annual job openings, \$24.48); and operating engineers and other construction equipment operators (167 annual job openings, \$38.15). The college and the unions associated with these occupations could consider developing a training partnership.

The marketing, sales, and services sector appears to have multiple sales-related occupations in high demand. Sales occupations are employed across numerous industries, including by retail trade industries. Occupations for program consideration include sales representatives (wholesale and manufacturing, except technical and scientific products) with 568 annual openings in the college area, sales representatives (services, all other) with 333 annual openings, and first-line supervisors of non-retail sales workers, 100 annual openings. The COVID-19 pandemic severely impacted businesses, particularly in-store retail in this sector, although many businesses specializing in online sales and services have prospered. Some businesses cut employment due to mandated restrictions designed to protect communities, but the extent of these cuts is not yet known in the college area. Please consult the Centers of Excellence for the latest information on businesses affected by the COVID-19 pandemic.

Norco College currently does not offer any programs related to health science and medical technology. This study has identified 12 potential occupations, accounting for 920 annual job openings in the college area, for which training could be provided. Eleven of these occupations are middle-skill. Two occupations with the greatest projected demand in the college area are registered nurses (470 annual job openings) and licensed vocational nurses (140 annual job openings).

Finally, while the number of occupations and job openings may appear relatively low in the Norco College area compared to other colleges, job openings in the greater region are numerous; this translates to many more job opportunities for students who have the ability and desire to commute outside of the college area for work. The college could market regional job opportunities to students. Some points to consider for opportunities outside the immediate vicinity are:

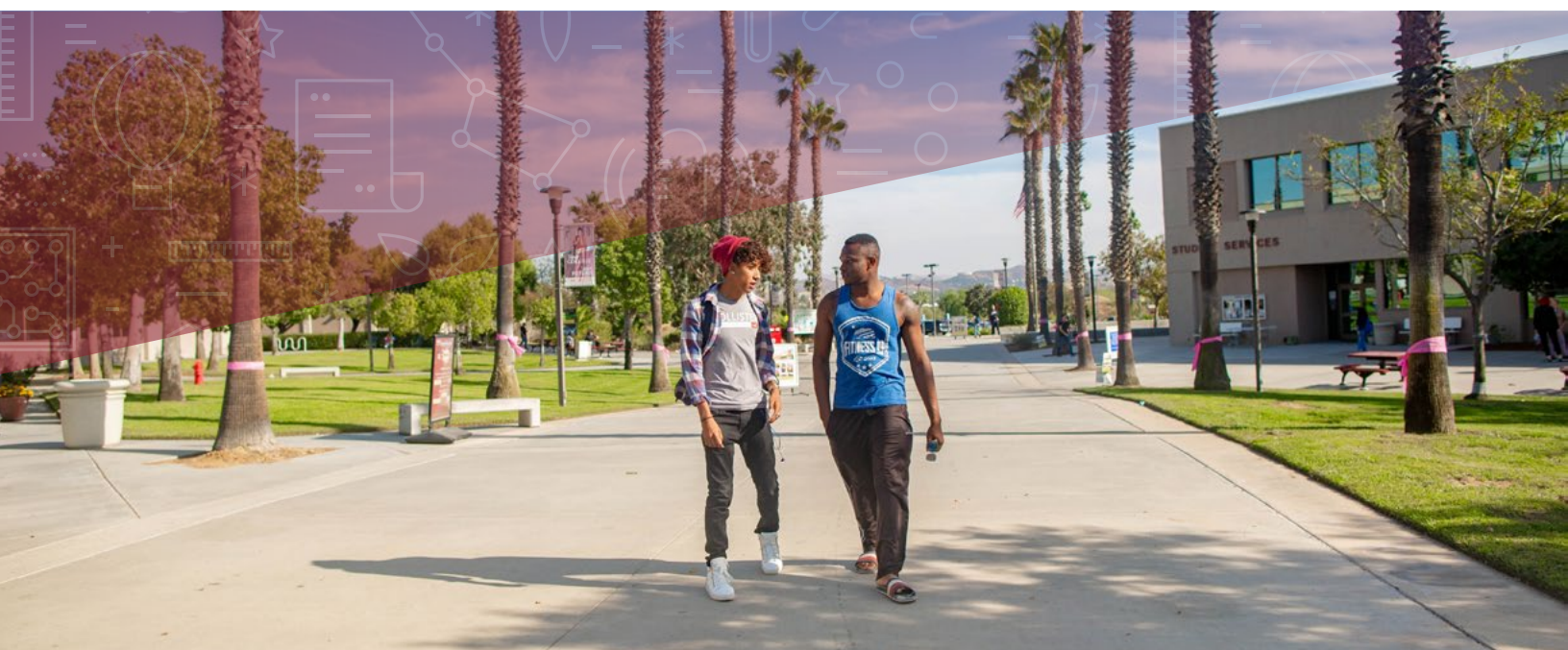
1. Norco College may choose to investigate what programs other area community colleges are offering and whether they are providing a sufficient number of workers to fill local job openings.
2. Norco College may choose to identify employers whose businesses are in close proximity to its campus and determine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

APPENDIX A: NORCO COLLEGE AREA

15 ZIP codes were employed for this analysis may not perfectly follow Norco 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. All data is derived from Emsi 2020.2.

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

ZIP	City/Community	2019 Population	2019 Jobs	Middle-skill Job Count
91708	Chino	11,197	5,550	1,507
92877	Corona	2,156	281	88
92878	Corona	2,563	873	330
92879	Corona	49,914	33,514	12,210
92880	Corona	73,916	27,045	11,922
92881	Corona	33,029	14,791	5,894
92882	Corona	70,825	20,730	9,087
92883	Corona	37,708	9,414	3,890
92509	Jurupa Valley	81,473	21,513	8,530
91752	Mira Loma	36,957	26,120	9,264
92860	Norco	27,473	21,814	7,782
91761	Ontario	66,624	89,166	32,552
91762	Ontario	66,955	19,235	7,455
92503	Riverside	94,595	29,300	12,350
92505	Riverside	54,803	26,925	8,924
TOTAL		710,187	346,271	131,784



APPENDIX B: DEMOGRAPHIC COMPOSITION REFERENCE

Exhibit B1: Gender by area

Gender	College Area (Percentage)	Region (Percentage)
Male	50.0%	50.2%
Female	50.0%	49.8%

Exhibit B2: Race and ethnicity by area

Race/Ethnicity	College Area	College Area (Percentage)	Region	Regional (Percentage)
White	549,644	77.4%	3,652,712	78.2%
Black	42,031	5.9%	385,998	8.3%
Two or More Races	27,854	3.9%	168,227	3.6%
Asian	75,214	10.6%	350,439	7.5%
American Indian or Native Alaskan	11,722	1.7%	93,383	2.0%
Native Hawaiian or Pacific Islander	3,722	0.5%	21,848	0.5%
Total Hispanic (All Races)	399,143	56.2%	2,434,825	52.1%

Exhibit B3: Age by area and five-year growth rate

Age Group	College Area 2019 Share	College Area Growth Rate	Regional Share	Regional Growth Rate
0-9	14%	8%	14%	7%
10-14	7%	-3%	7%	-3%
15-19	7%	2%	7%	1%
20-24	7%	-3%	7%	-5%
25-34	15%	5%	15%	3%
35-44	14%	8%	13%	8%
45-54	13%	0%	12%	-1%
55-64	11%	4%	11%	1%
65+	11%	21%	13%	18%

Exhibit B4: Unemployment rate by community

City/Community	Annual Average 2019	October 2020	November 2020	December 2020
Chino city	3.2%	7.5%	6.4%	7.4%
Corona city	3.1%	7.2%	6.3%	7.3%
Jurupa Valley city	3.7%	8.3%	7.5%	8.5%
Norco city	3.5%	6.9%	6.3%	7.2%
Ontario city	3.4%	8.0%	7.1%	8.2%
Riverside city	3.6%	8.2%	7.4%	8.4%



APPENDIX C: INDUSTRY AND LOCATION QUOTIENT DEFINITIONS, AND SECTORS WITH FEWER THAN 10,000 JOBS

Industry employment is a count of jobs in a given geography. Businesses operating within the same industry produce similar goods and services and share comparable production processes for creating these goods and services. The North American Industry Classification System (NAICS) is the federal system used to classify all business establishments into specific industries. Staffing patterns show the distribution of occupational employment and demand for each industry. For example, Norco 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 10,000 jobs, along with their 2019 job count and expected five-year job growth are:

- **Finance and insurance**, 4,076 jobs in 2019, reduction of eight jobs by 2024
- **Real estate and rental and leasing**, 3,622 jobs in 2019, addition of 204 jobs by 2024
- **Educational services**, 2,842 jobs in 2019, addition of 311 jobs by 2024
- **Arts, entertainment, and recreation**, 2,901 jobs in 2019, addition of 231 jobs by 2024
- **Information**, 2,387 jobs in 2019, addition of 105 jobs by 2024
- **Management of companies and enterprises**, 2,136 jobs in 2019, reduction of 89 jobs by 2024
- **Agriculture, forestry, fishing, and hunting**, 454 jobs in 2019, reduction of seven jobs by 2024
- **Utilities**, 306 jobs in 2019, addition of 67 jobs by 2024
- **Mining, quarrying, and oil and gas extraction**, 251 jobs in 2019, addition of 16 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 health care industry sector, but these jobs may also exist in educational industries. The Standard Occupational Classification (SOC) System classifies 775 detailed occupations according to the tasks and duties of each job.

Skill Level Categories

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

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

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

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

Occupations that meet both criteria are ideal.

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

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Accountants and Auditors	Higher-skill	178	934	\$25.84	\$33.75	\$42.91	Both
Administrative Services Managers	Higher-skill	51	259	\$34.42	\$47.33	\$62.97	Both
Aircraft Cargo Handling Supervisors	Middle-skill	7	15	\$12.00	\$17.69	\$20.22	High-wage
Aircraft Mechanics and Service Technicians	Middle-skill	55	185	\$27.04	\$34.63	\$48.55	Both
Appraisers and Assessors of Real Estate	Middle-skill	8	64	\$21.36	\$28.30	\$42.48	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
Architects, Except Landscape and Naval	Higher-skill	19	102	\$25.70	\$35.82	\$53.67	Both
Architectural and Civil Drafters	Middle-skill	26	123	\$20.13	\$27.44	\$36.01	Both
Architectural and Engineering Managers	Higher-skill	28	101	\$55.58	\$70.20	\$83.70	Both
Art Directors	Higher-skill	16	100	\$9.39	\$24.62	\$42.06	Both
Audio and Video Equipment Technicians	Middle-skill	14	87	\$14.23	\$18.65	\$28.93	Both
Bill and Account Collectors	Middle-skill	65	261	\$15.95	\$18.60	\$23.30	In-demand
Bookkeeping, Accounting, and Auditing Clerks	Middle-skill	427	2079	\$15.76	\$19.60	\$25.17	Both
Brickmasons and Blockmasons	Middle-skill	33	120	\$17.17	\$24.57	\$29.75	Both
Budget Analysts	Higher-skill	6	37	\$22.48	\$33.17	\$43.91	Both
Bus and Truck Mechanics and Diesel Engine Specialists	Middle-skill	121	483	\$18.32	\$24.05	\$30.33	Both
Business Operations Specialists, All Other	Middle-skill	218	1143	\$22.40	\$31.18	\$42.44	Both
Buyers and Purchasing Agents	Middle-skill	113	426	\$20.83	\$27.40	\$35.23	Both
Cargo and Freight Agents	Middle-skill	57	123	\$19.10	\$23.15	\$30.07	Both
Carpenters	Middle-skill	724	2591	\$16.61	\$22.93	\$29.57	Both
Chief Executives	Higher-skill	44	204	\$40.59	\$78.12	\$118.61	Both
Child, Family, and School Social Workers	Higher-skill	38	234	\$20.13	\$25.85	\$33.33	Both
Childcare Workers	Middle-skill	286	2008	\$9.71	\$12.04	\$15.76	In-demand
Civil Engineering Technicians	Middle-skill	12	67	\$26.41	\$29.74	\$35.59	Both
Civil Engineers	Higher-skill	59	285	\$40.81	\$52.01	\$63.56	Both
Clinical Laboratory Technologists and Technicians	Middle-skill	33	194	\$19.21	\$24.72	\$35.08	Both
Community and Social Service Specialists, All Other	Higher-skill	28	165	\$13.81	\$23.93	\$31.70	Both
Compliance Officers	Higher-skill	48	274	\$26.86	\$35.37	\$43.59	Both
Computer and Information Systems Managers	Higher-skill	33	152	\$52.52	\$68.15	\$82.80	Both
Computer Network Support Specialists	Middle-skill	23	108	\$22.76	\$28.00	\$37.23	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	Middle-skill	13	29	\$21.06	\$29.07	\$37.82	Both
Computer Programmers	Higher-skill	18	72	\$29.41	\$40.36	\$48.42	Both
Computer Systems Analysts	Higher-skill	42	186	\$31.78	\$39.87	\$50.65	Both
Computer User Support Specialists	Middle-skill	77	390	\$19.54	\$26.11	\$34.08	Both
Computer-Controlled Machine Tool Operators, Metal and Plastic	Middle-skill	46	102	\$14.48	\$17.92	\$22.20	In-demand
Construction and Building Inspectors	Middle-skill	31	164	\$31.27	\$40.80	\$53.80	Both
Correctional Officers and Jailers	Middle-skill	74	463	\$29.37	\$38.33	\$43.30	Both
Data Entry Keyers	Middle-skill	45	199	\$13.15	\$15.26	\$17.75	In-demand
Dental Hygienists	Middle-skill	30	186	\$40.54	\$45.41	\$50.58	Both
Desktop Publishers	Middle-skill	1	7	\$16.28	\$20.25	\$30.60	High-wage
Detectives and Criminal Investigators	Middle-skill	12	85	\$45.11	\$49.12	\$58.20	Both
Drafters, All Other	Middle-skill	6	21	\$16.74	\$20.09	\$32.48	Both
Electrical and Electronics Drafters	Middle-skill	8	33	\$21.61	\$29.00	\$37.79	Both
Electrical and Electronics Engineering Technicians	Middle-skill	27	107	\$22.49	\$29.45	\$38.39	Both
Electrical and Electronics Repairers, Commercial and Industrial Equipment	Middle-skill	16	70	\$25.74	\$31.82	\$38.57	Both
Electrical Power-Line Installers and Repairers	Middle-skill	44	148	\$25.84	\$35.93	\$54.40	Both
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	Middle-skill	76	230	\$12.77	\$15.08	\$19.58	In-demand
Electricians	Middle-skill	340	1365	\$18.07	\$24.28	\$32.53	Both
Elementary School Teachers, Except Special Education	Higher-skill	309	1962	\$33.13	\$42.88	\$48.90	Both
Engineering Technicians, Except Drafters, All Other	Middle-skill	22	86	\$26.71	\$34.76	\$42.10	Both
Engineers, All Other	Higher-skill	15	64	\$31.96	\$45.24	\$58.81	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
Executive Secretaries and Executive Administrative Assistants	Middle-skill	73	397	\$23.06	\$28.13	\$34.25	Both
Farmers, Ranchers, and Other Agricultural Managers	Middle-skill	7	230	\$16.19	\$21.41	\$51.02	Both
Financial Analysts	Higher-skill	18	89	\$30.40	\$37.97	\$48.04	Both
Financial Managers	Higher-skill	84	421	\$36.52	\$53.14	\$72.74	Both
Financial Specialists, All Other	Higher-skill	15	99	\$20.16	\$25.03	\$33.59	Both
Firefighters	Middle-skill	48	269	\$25.92	\$30.40	\$37.87	Both
First-Line Supervisors of Construction Trades and Extraction Workers	Middle-skill	273	1000	\$24.06	\$32.24	\$42.99	Both
First-Line Supervisors of Gaming Workers	Middle-skill	24	146	\$20.78	\$27.77	\$33.45	Both
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Middle-skill	62	267	\$15.42	\$22.64	\$32.54	Both
First-Line Supervisors of Mechanics, Installers, and Repairers	Middle-skill	111	500	\$26.09	\$33.91	\$42.44	Both
First-Line Supervisors of Non-Retail Sales Workers	Middle-skill	100	402	\$15.25	\$24.90	\$37.23	Both
First-Line Supervisors of Office and Administrative Support Workers	Middle-skill	364	1750	\$20.78	\$26.41	\$33.50	Both
First-Line Supervisors of Production and Operating Workers	Middle-skill	193	589	\$21.56	\$28.35	\$38.26	Both
First-Line Supervisors of Retail Sales Workers	Middle-skill	312	1981	\$14.17	\$19.24	\$25.07	In-demand
First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	Middle-skill	339	1134	\$20.66	\$27.19	\$33.41	Both
Food Service Managers	Middle-skill	102	653	\$15.83	\$20.87	\$29.15	Both
Forensic Science Technicians	Middle-skill	8	45	\$30.18	\$35.39	\$42.10	Both
General and Operations Managers	Higher-skill	489	2162	\$31.34	\$48.54	\$69.84	Both
Glaziers	Middle-skill	39	125	\$17.08	\$29.05	\$55.40	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Graphic Designers	Middle-skill	60	255	\$16.44	\$20.71	\$29.83	Both
Healthcare Support Workers, All Other	Middle-skill	32	208	\$18.22	\$21.26	\$24.08	In-demand
Heavy and Tractor-Trailer Truck Drivers	Middle-skill	1247	4395	\$16.43	\$21.57	\$28.71	Both
Human Resources Managers	Higher-skill	29	152	\$41.68	\$54.47	\$69.44	Both
Human Resources Specialists	Higher-skill	122	607	\$24.36	\$29.60	\$37.34	Both
Industrial Engineering Technicians	Middle-skill	17	48	\$22.43	\$29.48	\$36.74	Both
Industrial Engineers	Higher-skill	44	119	\$29.74	\$38.44	\$48.97	Both
Industrial Machinery Mechanics	Middle-skill	92	301	\$22.40	\$27.95	\$33.68	Both
Industrial Production Managers	Middle-skill	47	132	\$36.09	\$47.52	\$62.53	Both
Interpreters and Translators	Middle-skill	16	100	\$18.52	\$26.11	\$40.13	Both
Kindergarten Teachers, Except Special Education	Higher-skill	22	144	\$24.89	\$34.17	\$38.76	Both
Legal Secretaries	Middle-skill	21	152	\$18.20	\$25.39	\$30.85	Both
Licensed Vocational Nurse	Middle-skill	140	809	\$20.90	\$25.10	\$29.89	Both
Loan Officers	Middle-skill	35	224	\$14.26	\$26.98	\$44.08	Both
Machinists	Middle-skill	175	411	\$15.35	\$19.27	\$25.28	Both
Maintenance and Repair Workers, General	Middle-skill	296	1684	\$14.89	\$19.84	\$26.30	In-demand
Management Analysts	Higher-skill	128	679	\$26.81	\$37.83	\$53.36	Both
Managers, All Other	Higher-skill	199	920	\$17.06	\$34.61	\$57.22	Both
Market Research Analysts and Marketing Specialists	Higher-skill	129	591	\$18.54	\$26.18	\$36.30	Both
Marketing Managers	Higher-skill	30	130	\$35.55	\$48.04	\$70.92	Both
Mechanical Drafters	Middle-skill	17	53	\$19.70	\$24.37	\$30.60	Both
Mechanical Engineering Technicians	Middle-skill	6	19	\$16.66	\$21.06	\$28.64	Both
Mechanical Engineers	Higher-skill	39	123	\$32.57	\$40.53	\$50.53	Both
Medical and Health Services Managers	Higher-skill	73	401	\$43.12	\$56.33	\$70.83	Both
Medical Records and Health Information Technicians	Middle-skill	32	184	\$17.09	\$22.44	\$36.36	Both
Meeting, Convention, and Event Planners	Higher-skill	21	125	\$17.25	\$22.96	\$33.04	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
Middle School Teachers, Except Special and Career/ Technical Education	Higher-skill	55	352	\$31.64	\$39.99	\$45.96	Both
Mobile Heavy Equipment Mechanics, Except Engines	Middle-skill	65	240	\$24.21	\$30.12	\$35.78	Both
Multimedia Artists and Animators	Middle-skill	7	36	\$6.69	\$15.36	\$31.22	Both
Music Directors and Composers	Higher-skill	8	85	\$13.94	\$22.59	\$37.82	Both
Network and Computer Systems Administrators	Middle-skill	34	158	\$30.39	\$38.48	\$50.43	Both
Operating Engineers and Other Construction Equipment Operators	Middle-skill	167	554	\$26.92	\$38.15	\$45.18	Both
Paralegals and Legal Assistants	Middle-skill	36	262	\$22.27	\$27.46	\$35.00	Both
Payroll and Timekeeping Clerks	Middle-skill	49	238	\$18.83	\$22.56	\$26.50	Both
Personal Financial Advisors	Higher-skill	16	122	\$25.86	\$36.52	\$87.10	Both
Physical Therapist Assistants	Middle-skill	13	103	\$30.72	\$34.61	\$38.13	Both
Plumbers, Pipefitters, and Steamfitters	Middle-skill	276	983	\$16.81	\$24.48	\$30.10	Both
Police and Sheriff's Patrol Officers	Middle-skill	98	628	\$36.88	\$47.03	\$57.47	Both
Preschool Teachers, Except Special Education	Middle-skill	56	413	\$12.55	\$14.36	\$17.65	In-demand
Probation Officers and Correctional Treatment Specialists	Higher-skill	20	125	\$32.78	\$38.66	\$50.79	Both
Procurement Clerks	Middle-skill	16	67	\$18.77	\$22.27	\$24.83	Both
Production, Planning, and Expediting Clerks	Middle-skill	150	537	\$17.76	\$22.06	\$27.74	Both
Proofreaders and Copy Markers	Higher-skill	2	8	\$14.25	\$18.30	\$23.96	In-demand
Property, Real Estate, and Community Association Managers	Middle-skill	31	289	\$19.83	\$30.43	\$51.81	Both
Psychiatric Technicians	Middle-skill	17	149	\$31.98	\$34.62	\$37.58	Both
Public Relations Specialists	Higher-skill	30	177	\$21.09	\$29.25	\$40.28	Both
Radiologic Technologists	Middle-skill	28	140	\$30.62	\$36.03	\$41.78	Both

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Real Estate Brokers	Middle-skill	18	168	\$18.25	\$37.66	\$56.98	Both
Real Estate Sales Agents	Middle-skill	54	476	\$15.97	\$26.42	\$44.61	Both
Registered Nurses	Middle-skill	470	2616	\$38.82	\$47.45	\$58.41	Both
Respiratory Therapists	Middle-skill	23	150	\$29.33	\$35.39	\$41.59	Both
Sales Managers	Higher-skill	140	559	\$27.32	\$43.00	\$71.18	Both
Sales Representatives, Services, All Other	Middle-skill	333	1437	\$14.82	\$22.92	\$33.68	Both
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Middle-skill	568	1777	\$18.91	\$27.77	\$39.03	Both
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Higher-skill	54	169	\$24.30	\$34.64	\$52.10	Both
Secondary School Teachers, Except Special and Career/ Technical Education	Higher-skill	163	1034	\$31.61	\$40.49	\$47.02	Both
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	Middle-skill	508	2760	\$14.16	\$18.58	\$23.76	In-demand
Sheet Metal Workers	Middle-skill	79	261	\$17.17	\$24.15	\$30.67	Both
Social and Community Service Managers	Higher-skill	49	249	\$18.91	\$30.62	\$49.47	Both
Social Workers, All Other	Higher-skill	44	263	\$27.08	\$33.84	\$41.17	Both
Software Developers, Applications	Higher-skill	56	237	\$38.82	\$48.70	\$60.83	Both
Software Developers, Systems Software	Higher-skill	34	118	\$37.41	\$48.83	\$62.03	Both
Solar Photovoltaic Installers	Middle-skill	15	52	\$16.80	\$19.15	\$25.83	Both
Sound Engineering Technicians	Middle-skill	3	17	\$11.22	\$15.10	\$26.72	Both
Special Education Teachers, Kindergarten and Elementary School	Higher-skill	32	203	\$29.24	\$37.82	\$47.13	Both
Special Education Teachers, Middle School	Higher-skill	7	46	\$33.38	\$38.72	\$45.60	Both
Special Education Teachers, Preschool	Middle-skill	9	51	\$11.00	\$12.07	\$18.09	Neither

Continued

Occupation	Skill Level	College Area Annual Openings	Regional Annual Openings	Pct. 25 Hourly Earnings	Median Hourly Earnings	Pct. 75 Hourly Earnings	Perkins V
Special Education Teachers, Secondary School	Higher-skill	18	114	\$37.33	\$43.18	\$47.84	Both
Structural Iron and Steel Workers	Middle-skill	74	237	\$21.97	\$32.33	\$39.40	Both
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Higher-skill	78	532	\$17.20	\$21.24	\$26.94	Both
Substitute Teachers	Higher-skill	296	1788	\$16.37	\$18.05	\$21.09	In-demand
Surgical Technologists	Middle-skill	29	135	\$22.87	\$27.39	\$32.60	Both
Tax Preparers	Middle-skill	19	123	\$11.75	\$16.73	\$31.80	Both
Teacher Assistants	Middle-skill	380	2469	\$13.79	\$16.84	\$19.75	In-demand
Teachers and Instructors, All Other	Higher-skill	87	615	\$12.71	\$16.79	\$26.42	In-demand
Telecommunications Equipment Installers and Repairers, Except Line Installers	Middle-skill	103	403	\$22.21	\$26.71	\$30.13	Both
Telecommunications Line Installers and Repairers	Middle-skill	56	179	\$17.20	\$25.59	\$35.66	Both
Training and Development Specialists	Middle-skill	59	290	\$19.05	\$27.60	\$37.68	Both
Transportation, Storage, and Distribution Managers	Middle-skill	78	279	\$32.81	\$41.71	\$54.09	Both
Water and Wastewater Treatment Plant and System Operators	Middle-skill	26	146	\$26.25	\$32.87	\$40.77	Both
Web Developers	Middle-skill	26	109	\$16.52	\$24.36	\$36.27	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

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