Equity Gaps in Priority Jobs and Programs

Considerations for Community College Diversity, Equity, Inclusion and Belonging Strategies

SAN DIEGO COUNTY

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COMMUNITY COLLEGES SAN DIEGO & IMPERIAL COUNTIES CAREER EDUCATION

California Community Colleges

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Executive Summary

The Center of Excellence (COE) for the San Diego and Imperial Counties Community Colleges commissioned the San Diego Workforce Partnership to analyze labor market and postsecondary education data to identify 1) *priority jobs* and *priority programs* in the region and 2) equity gaps within these occupations and academic programs based on age, gender, and race/ethnicity.

Priority jobs are defined as occupations that:

- Require at least a high school diploma but less than a bachelor's degree
- Have at least 50 annual job openings in San Diego County[1]
- Pay at or above the living wage of $18.43 per hour for a single adult in San Diego County[2]
- Typically require fewer than five years of work experience at entry

This report identified 91 priority jobs and found equity gaps in gender, age, and race/ethnicity after comparing the demographic composition of these occupations to the demographic composition of the labor force in San Diego County. Females and males were significantly underrepresented in 56 and 33 priority jobs, respectively. Seventy-two priority jobs differed significantly for at least one black, indigenous, and people of color (BIPOC) race/ethnic group, and 19 jobs were underrepresented by BIPOC women and 14 by BIPOC men. Additionally, 47 occupations were significantly overrepresented by individuals ages 55 and over, suggesting that for over 50 percent of these occupations their workforce is close to retirement.

Priority programs are defined as community college programs that train for priority jobs. There are 98 priority programs,[3] with 236 program offerings in Fall 2021. To identify equity gaps in programs, this report compares demographic data of program enrollments to demographic data of the overall community college student population. The analysis revealed a significant underrepresentation of females in 40 programs, males in 18 programs, students 19 and younger in 32 programs, BIPOC in 44 programs, and BIPOC women in 22 programs.

The COE commissioned this study to encourage meaningful discussions and collaborations among the San Diego and Imperial Counties Community Colleges. By identifying equity gaps in priority jobs, these findings can inform diversity, equity, inclusion, and belonging strategies, such as targeted recruitment and retention efforts for priority programs. Consequently, the COE hopes that more equitable priority programs would lead to more equitable representation in priority jobs. **Disclaimer: This study does not compare labor market demand against program supply to identify supply gaps, so it should not be used to develop new programs.**

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[1] SDWP pulled the labor market occupational data on January 6, 2022 from Lightcast (formerly EMSI), 2022-2027. Openings are defined as the net number of new jobs in an occupation plus the number of retirements; conceptually, this is the number of openings for a new person to enter the occupation.
[2] "Family Needs Calculator (formerly the California Family Needs Calculator)," Insight: Center for Community Economic Development, last updated 2021. insightcced.org/family-needs-calculator
[3] "Priority programs" are defined by Taxonomy of Programs (TOP) codes. In other words, there are 98 TOP codes and within the 98 TOP codes, there were 236 active community college programs as of Fall 2021 in San Diego County. See Appendix B: Methodology for information about the data.

Introduction

Community colleges are the primary resource for preparing workers in *middle-skill jobs*[4] – jobs that require more than a high school diploma, but less than a four-year degree. According to the National Skills Coalition,[5] 47 percent of jobs in California in 2018 were classified as middle-skill jobs, but only 39 percent of California workers had the educational attainment to fill these positions.

To determine what middle-skill jobs are also in high demand and offer high wages, this study examined 867 occupations in the Standard Occupational Classification[6] (SOC) system. Of the 867 SOC occupations, 91 require less than a bachelor's degree, but more than a high school diploma; have more than 50 projected annual job openings in San Diego County between 2022-2027;[7] provide entry-level wages are at or above the living wage, which is $18.43 per hour for a single adult in San Diego County;[8] and require fewer than five years of experience at entry. For the purpose of this study, these 91 high-demand, high-wage occupations are referred to as *priority jobs* (Figure 1).

Figure 1. Total SOC Occupations and Priority Jobs

In terms of labor market demand, these 91 priority jobs are projected to have 21,314 annual job openings between 2022 and 2027, which is 13 percent of all annual job openings in San Diego County (Figure 2).

Figure 2. Labor Market Demand: Annual Job Openings in San Diego County, 2022-2027

162,000

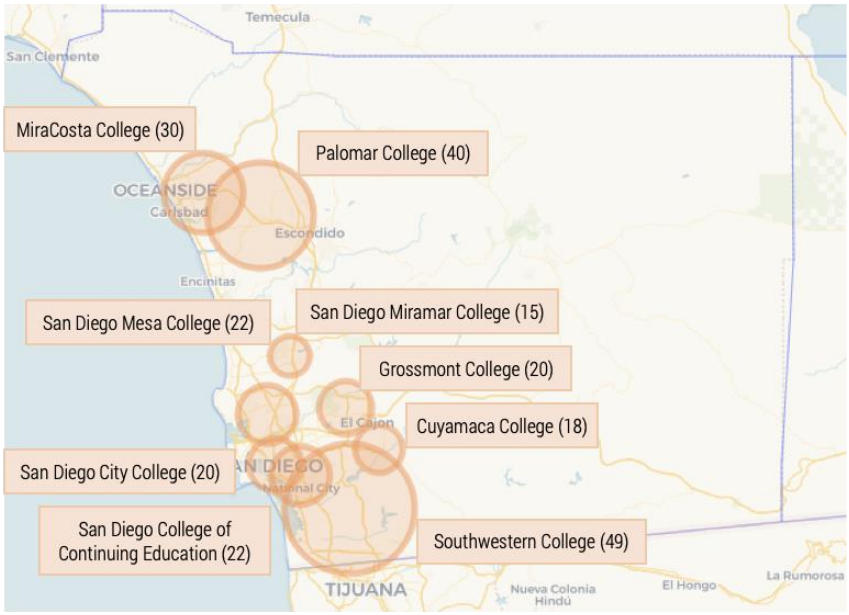
Annual job openings for 867 SOC occupations in San Diego County

21,314

Annual job openings for 91priority jobs in San Diego County

[4] "The Path Less Taken: Barriers to Providing Career and Technical Education at Community Colleges," American Enterprise Institute, aei.org/wp-content/uploads/2017/11/The-Path-Less-Taken.pdf?x91208
[5] "The California Skills Mismatch," National Skills Coalition, nationalskillscoalition.org/skills-mismatch/california-skills-mismatch
[6] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. The report will use these titles to match those defined by this system. bls.gov/soc
[7] Lightcast (formerly EMSI); QCEW, Non-QCEW, Self-Employed. SDWP pulled the labor market occupational data on January 6, 2022.
[8] "Family Needs Calculator (formerly the California Family Needs Calculator)," Insight: Center for Community Economic Development, last updated 2021. insightcced.org/family-needs-calculator

Figure 3. Priority Programs in San Diego County[9]



Priority programs are defined as community college programs that train for the priority jobs identified in this report. The California Community Colleges assigned a Taxonomy of Programs (TOP) code to each academic program in the system.[10] TOP is a system of codes used by the State of California to compare differently named academic programs with similar outcomes across the community colleges.[11] This report identified 98 TOP codes or priority programs that prepare students for the 91 priority jobs. Numerous program offerings exist across the 98 TOP codes, resulting in a total of 236 active programs in the region as of Fall 2021 (Figure 3).

The Center of Excellence (COE) for the San Diego and Imperial Counties Community Colleges commissioned the San Diego Workforce Partnership to analyze labor market and postsecondary education data to identify 1) priority jobs and priority programs in the region and 2) equity gaps within these occupations and programs based on age, gender, and race/ethnicity. By identifying equity gaps, the community colleges could focus their targeted recruitment and retention efforts for priority programs, which could then lead to more equitable representation in priority jobs within the region.

[9] San Diego and Imperial Counties Community Colleges Catalog, 2021. Data was pulled from Chancellor's Office Curriculum Inventory (COCI) 2.0. Only active programs listed were included and note that the status of these programs may have changed since the data was pulled. coci2.ccctechcenter.org/programs

[10] "Taxonomy of Programs," California Community Colleges, cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx

[11] TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).

Priority Jobs in San Diego County

The following table lists the 91 SOC occupations that met the priority jobs definition for this study (Table 1). Please note that this list is not a result of comparing labor market demand against program supply and should not be used for program development. For more information about the annual job openings (labor market demand), entry-level wages, and typical entry-level education for these occupations, see Appendix A (Exhibit 1).

Table 1. SOC Codes and Occupational Titles for Priority Jobs in San Diego County

SOC Code and Occupational Title		SOC Code and Occupational Title	
27-2011	Actors	47-2111	Electricians
49-3011	Aircraft Mechanics and Service Technicians	43-4061	Eligibility Interviewers, Government Programs
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	19-4042	Environmental Science and Protection Technicians, Including Health
17-3011	Architectural and Civil Drafters	43-6011	Executive Secretaries and Executive Administrative Assistants
43-3031	Bookkeeping, Accounting, and Auditing Clerks	33-2011	Firefighters
43-4011	Brokerage Clerks	37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers
47-2031	Carpenters	41-1012	First-Line Supervisors of Non-Retail Sales Workers
47-2051	Cement Masons and Concrete Finishers	43-1011	First-Line Supervisors of Office and Administrative Support Workers
51-9011	Chemical Equipment Operators and Tenders	51-1011	First-Line Supervisors of Production and Operating Workers
17-3022	Civil Engineering Technologists and Technicians	33-1099	First-Line Supervisors, Protective Service Workers
13-1031	Claims Adjusters, Examiners, and Investigators	53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors
15-1231	Computer Network Support Specialists	53-2031	Flight Attendants
15-1232	Computer User Support Specialists	47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	11-9051	Food Service Managers
33-3012	Correctional Officers and Jailers	47-2121	Glaziers
43-4031	Court, Municipal, and License Clerks	31-9099	Healthcare Support Workers, All Other
29-1292	Dental Hygienists	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers
33-3021	Detectives and Criminal Investigators	47-4051	Highway Maintenance Workers

SOC Code and Occupational Title		SOC Code and Occupational Title	
47-2081	Drywall and Ceiling Tile Installers	43-4161	Human Resources Assistants, Except Payroll and Timekeeping
49-9051	Electrical Power-Line Installers and Repairers	17-3026	Industrial Engineering Technologists and Technicians
17-3023	Electrical and Electronic Engineering Technologists and Technicians	43-5031	Public Safety Telecommunicators
49-9041	Industrial Machinery Mechanics	29-2034	Radiologic Technologists and Technicians
41-3021	Insurance Sales Agents	41-9021	Real Estate Brokers
43-6012	Legal Secretaries and Administrative Assistants	41-9022	Real Estate Sales Agents
29-2061	Licensed Practical and Licensed Vocational Nurses	29-1126	Respiratory Therapists
19-4099	Life, Physical, and Social Science Technicians, All Other	47-2181	Roofers
31-9093	Medical Equipment Preparers	41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
31-2011	Occupational Therapy Assistants	49-2098	Security and Fire Alarm Systems Installers
47-2073	Operating Engineers and Other Construction Equipment Operators	47-2211	Sheet Metal Workers
23-2011	Paralegals and Legal Assistants	47-2231	Solar Photovoltaic Installers
47-2071	Paving, Surfacing, and Tamping Equipment Operators	47-2221	Structural Iron and Steel Workers
43-3051	Payroll and Timekeeping Clerks	29-2055	Surgical Technologists
37-2021	Pest Control Workers	17-3031	Surveying and Mapping Technicians
31-9097	Phlebotomists	13-2082	Tax Preparers
31-2021	Physical Therapist Assistants	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers
47-2161	Plasterers and Stucco Masons	49-9052	Telecommunications Line Installers and Repairers
47-2152	Plumbers, Pipefitters, and Steamfitters	33-9093	Transportation Security Screeners
33-3051	Police and Sheriffs Patrol Officers	37-3013	Tree Trimmers and Pruners
43-5052	Postal Service Mail Carriers	29-2056	Veterinary Technologists and Technicians
43-3061	Procurement Clerks	51-8031	Water and Wastewater Treatment Plant and System Operators
43-5061	Production, Planning, and Expediting Clerks	15-1257	Web Developers and Digital Interface Designers
11-9141	Property, Real Estate, and Community Association Managers	15-4121	Welders, Cutters, Solderers, and Brazers
29-2053	Psychiatric Technicians		

Priority Programs

Priority programs are TOP codes related to at least one SOC code in the priority jobs list (Table 1). Based on this definition, there are 98 TOP codes or priority programs[12] across San Diego County's nine community colleges: Cuyamaca College, Grossmont College, MiraCosta College, Palomar College, San Diego City College, San Diego College of Continuing Education, San Diego Mesa College, San Diego Miramar College, and Southwestern College. Within these 98 TOP codes (Table 2), a combined 236 academic programs were active as of Fall 2021.[13] For more information about these 98 priority programs, or TOP codes, see Appendix A (Exhibit 2).

Table 2. 98 TOP Codes for Priority Programs in San Diego County

TOP Code	Program Name	TOP Code	Program Name
0102.10	Veterinary Technician (Licensed)	0702.10	Software Applications
0104.00	Viticulture, Enology, and Wine Business	0706.00	Computer Science (Transfer)
0109.00	Horticulture	0707.00	Computer Software Development
0109.10	Landscape Design and Maintenance	0707.10	Computer Programming
0109.30	Nursery Technology	0707.30	Computer Systems Analysis
0109.40	Turfgrass Technology	0708.00	Computer Infrastructure and Support
0201.00	Architecture and Architectural Technology	0708.10	Computer Networking
0301.00	Environmental Science	0708.20	Computer Support
0303.00	Environmental Technology	0709.00	World Wide Web Administration
0430.00	Biotechnology and Biomedical Technology	0709.10	E-Commerce (Technology emphasis)
0502.00	Accounting	0934.00	Electronics and Electric Technology
0502.10	Tax Studies	0934.40	Electrical Systems and Power Transmission
0506.30	Management Development and Supervision	0946.00	Environmental Control Technology
0509.00	Marketing and Distribution	0946.10	Energy Systems Technology
0509.40	Sales and Salesmanship	0947.00	Diesel Technology
0509.60	Display	0947.20	Heavy Equipment Maintenance
0509.70	E-Commerce (Business emphasis)	0950.00	Aeronautical and Aviation Technology
0511.00	Real Estate	0950.10	Aviation Airframe Mechanics
0512.00	Insurance	0950.20	Aviation Powerplant Mechanics

[12] TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).
[13] The California Community Colleges Chancellor's Office LaunchBoard provides data for individual colleges and for regions, but not for counties. San Diego County data were calculated by subtracting Imperial Valley College values from San Diego-Imperial regional values. Enrollment data (2016-2017) was the most recent data available at the start of the project and more recent years are now available.

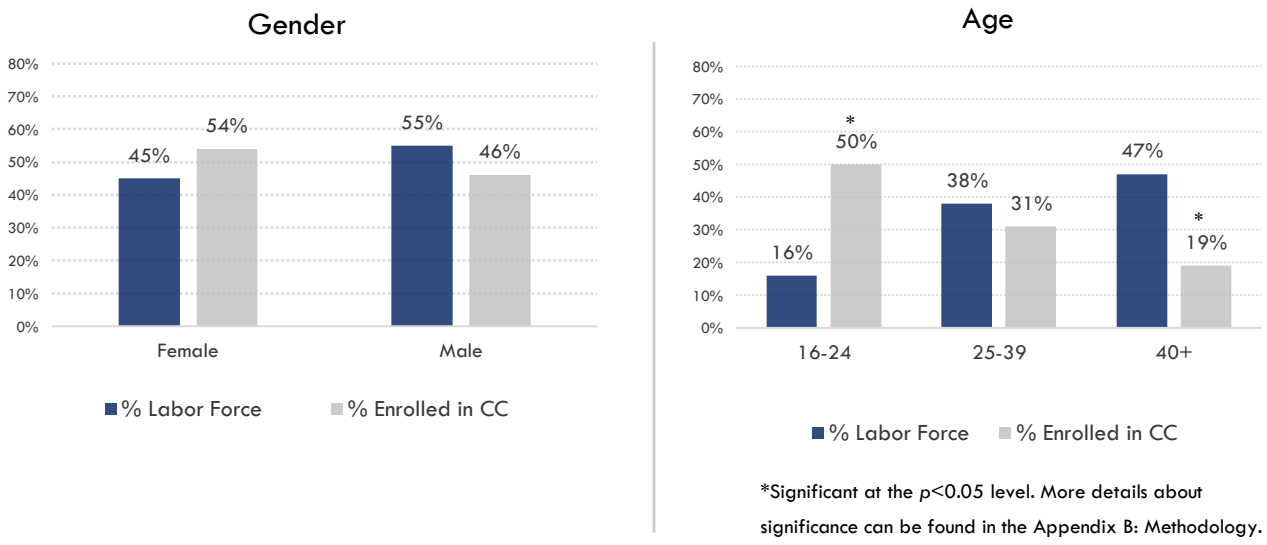
TOP Code	Program Name	TOP Code	Program Name
0514.00	Office Technology/Office Computer Applications	0952.00	Construction Crafts Technology
0514.10	Legal Office Technology	0952.10	Carpentry
0514.20	Medical Office Technology	0952.20	Electrical
0614.00	Digital Media	0952.30	Plumbing, Pipefitting and Steamfitting
0614.30	Website Design and Development	0952.60	Masonry, Tile, Cement, Lath and Plaster
0701.00	Information Technology, General	0952.80	Drywall and Insulation
0702.00	Computer Information Systems	0953.00	Drafting Technology
0955.00	Laboratory Science Technology	1225.00	Radiologic Technology
0956.00	Manufacturing and Industrial Technology	1230.00	Nursing
0956.50	Welding Technology	1230.20	Licensed Vocational Nursing
0956.70	Industrial and Occupational Safety and Health	1240.20	Dental Hygienist
0957.00	Civil and Construction Management Technology	1299.00	Other Health Occupations
0957.30	Surveying	1303.20	Fashion Merchandising
0958.00	Water and Wastewater Technology	1307.00	Hospitality
0999.00	Other Engineering and Related Industrial Technologies	1307.10	Restaurant and Food Services and Management
1005.00	Commercial Music	1307.20	Lodging Management
1006.00	Technical Theater	1401.00	Law, General
1007.00	Dramatic Arts	1402.00	Paralegal
1009.00	Applied Design	2105.00	Administration of Justice
1030.00	Graphic Art and Design	2105.10	Corrections
1205.10	Phlebotomy	2105.20	Probation and Parole
1208.00	Medical Assisting	2105.30	Industrial and Transportation Security
1208.20	Administrative Medical Assisting	2105.40	Forensics, Evidence, and Investigation
1209.00	Hospital Central Service Technician	2105.50	Police Academy
1210.00	Respiratory Care/Therapy	2133.00	Fire Technology
1214.00	Orthopedic Assistant	2133.10	Wildland Fire Technology
1217.00	Surgical Technician	2133.50	Fire Academy
1218.00	Occupational Therapy Technology	2199.00	Other Public and Protective Services
1222.00	Physical Therapist Assistant	2206.00	Geography
1223.00	Health Information Technology	2206.10	Geographic Information Systems

Examining Equity Gaps

This section provides the demographic composition (gender, age, race/ethnicity) of labor force participants and community college students in San Diego County. The percentage breakdowns for gender, age, and race/ethnicity illustrated below serve as benchmarks to compare against when examining equity gaps in priority jobs and programs. For this study, equitable representation in priority jobs indicates that the demographics of workers in priority jobs closely reflect those in San Diego County's labor force.[14] Similarly, equitable representation in priority programs suggests that the demographics of students enrolled in priority programs closely reflect those of the community college student population.

In 2016, there were approximately 2.2 million individuals of working age (16-64 years) residing in San Diego County. Nearly three-quarters of the working-age population participated in the labor force (1.6 million residents) and 10 percent were enrolled in community colleges (208,241) in program year 2016-2017. (For maximum comparability across various labor market and academic data sources, this study used 2016 data and limited the population to working-age residents, see Appendix B: Methodology). Compared to labor force participants, the community college student population had more females (54 percent vs. 45 percent) and was generally younger (50 percent vs.16 percent) (Figure 4).[15] Detailed figures and percentages for these demographic categories can be found in Appendix A (Exhibit 3).

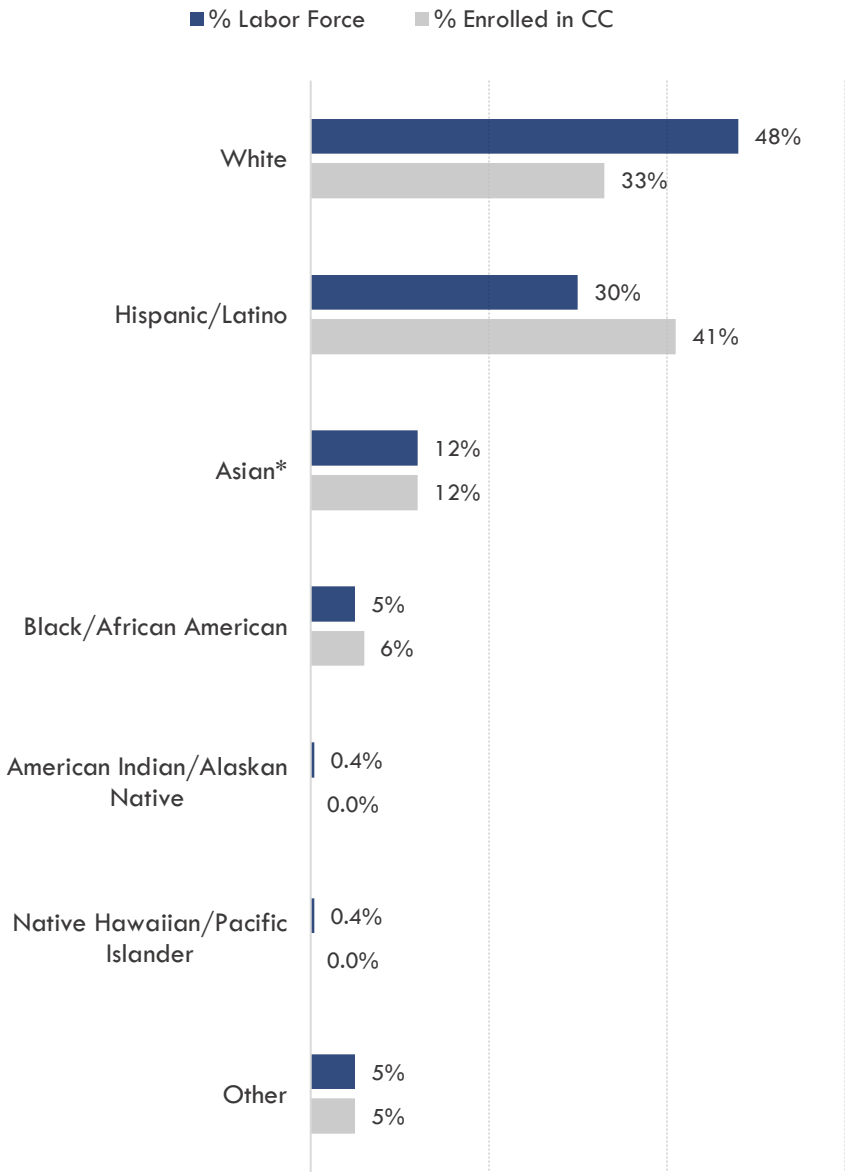
Figure 4. Labor Force Participants[16] and Community College Enrollments in San Diego County by Gender and Age[17]



*Significant at the $p<0.05$ level. More details about significance can be found in the Appendix B: Methodology.

[14] Information about how these comparison groups were defined and how analyses were conducted can be found in Appendix B: Methodology.
[15] U.S. Census Bureau 2016 five-year American Community Survey Public Use Microdata Sample (ACS PUMS) for San Diego and Imperial Counties. We limited the sample to working-age residents (those age 16 to 64) for maximum comparability across data sources.
[16] "Labor Force Statistics Glossary," U.S. Census Bureau, census.gov/topics/employment/labor-force/about/glossary.html
[17] Labor force participant information was obtained from the American Community Survey, 2016 (5-year estimates). Community college enrollment data were obtained using LaunchBoard, 2016-2017. For more information about sources please see Appendix B: Methodology.

Figure 5. Labor Force Participants[18] and Community College Enrollments in San Diego County by Race/Ethnicity[19]



*For this comparison, Asian included Filipino. California community college data separates Filipino from Asian, but U.S. Census Bureau data combines these two racial/ethnic groups.

In terms of race/ethnicity, fewer White residents enrolled in the community colleges than Hispanic/Latino residents (33 percent vs. 41 percent), which conversely meant that more White residents participated in the labor force than Hispanic/Latino residents (48 percent vs. 30 percent). There was no other race/ethnic group with a significant underrepresentation in enrollments.

To determine where there are under- or overrepresented groups, the following sections compare these labor force and enrollment demographic percentages to those in priority jobs and programs, respectively.

[18] "Labor Force Statistics Glossary," U.S. Census Bureau, census.gov/topics/employment/labor-force/about/glossary.html

[19] Labor force participant information was obtained from the American Community Survey, 2016 (5-year estimates). Community college enrollment data were obtained using LaunchBoard, 2016-2017. For more information about sources please see Appendix B: Methodology.

Equity Gaps in Priority Jobs

For this study, equitable representation in priority jobs suggests that the demographic composition of workers in priority jobs closely reflects the demographic composition of San Diego County's labor force. The statistical analysis found that females were significantly underrepresented in 56 priority jobs; males in 33; black, indigenous, and people of color (BIPOC) in 72; BIPOC women in 19; and BIPOC men in 14 priority jobs. Additionally, individuals aged 55 and older were overrepresented in 47 priority jobs (Table 3). For the demographic composition (gender, age, ethnicity/race) in each priority job, see Appendix A (Exhibit 4 through Exhibit 10).

Table 3. Number of Priority Jobs with Significant Under- or Overrepresentation by Demographic Group

Demographic Group	# of Jobs with Underrepresentation	# Jobs with Overrepresentation
Females	56	
Males	33	
Ages 55 and older		47
BIPOC	72	
BIPOC Women	19	
BIPOC Men	14	

Priority Jobs Underrepresented by Females

Compared to the percentage of females participating in the labor force, females were significantly underrepresented in 56 priority jobs (Table 4). The occupations with the lowest representation of females were "Bus and Truck Mechanics and Diesel Engine Specialists," "Cement Masons and Concrete Finishers," and "Electrical Power-Line Installers and Repairers." For the full list, see Appendix A (Exhibit 4).

Table 4. Priority Jobs Underrepresented by Females in San Diego County

SOC Code	Occupational Title	% Female
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	1%
47-2051	Cement Masons and Concrete Finishers	2%
49-9051	Electrical Power-Line Installers and Repairers	2%
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	2%
47-2152	Plumbers, Pipefitters, and Steamfitters	2%
49-2098	Security and Fire Alarm Systems Installers	2%
47-2031	Carpenters	3%

SOC Code	Occupational Title	% Female
47-2111	Electricians	3%
47-2121	Glaziers	3%
49-9041	Industrial Machinery Mechanics	3%
47-2073	Operating Engineers and Other Construction Equipment Operators	3%
47-2071	Paving, Surfacing, and Tamping Equipment Operators	3%
47-2181	Roofers	3%
47-2221	Structural Iron and Steel Workers	3%
47-4051	Highway Maintenance Workers	4%
47-2161	Plasterers and Stucco Masons	4%
47-2211	Sheet Metal Workers	4%
47-2231	Solar Photovoltaic Installers	4%
49-3011	Aircraft Mechanics and Service Technicians	5%
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	5%
33-2011	Firefighters	6%
49-9052	Telecommunications Line Installers and Repairers	6%
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	7%
51-8031	Water and Wastewater Treatment Plant and System Operators	7%
51-4121	Welders, Cutters, Solderers, and Brazers	7%
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	8%
47-2081	Drywall and Ceiling Tile Installers	8%
37-2021	Pest Control Workers	10%
17-3031	Surveying and Mapping Technicians	10%
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	12%
37-3013	Tree Trimmers and Pruners	15%
51-9011	Chemical Equipment Operators and Tenders	17%
17-3023	Electrical and Electronic Engineering Technologists and Technicians	17%
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	18%
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	19%
17-3022	Civil Engineering Technologists and Technicians	20%

SOC Code	Occupational Title	% Female
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	20%
17-3026	Industrial Engineering Technologists and Technicians	20%
33-3051	Police and Sheriffs Patrol Officers	20%
17-3011	Architectural and Civil Drafters	22%
51-1011	First-Line Supervisors of Production and Operating Workers	22%
33-1099	First-Line Supervisors, Protective Service Workers	23%
15-1231	Computer Network Support Specialists	27%
15-1232	Computer User Support Specialists	27%
33-3021	Detectives and Criminal Investigators	27%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	30%
15-1257	Transportation Security Screeners	33%
33-9093	Web Developers and Digital Interface Designers	33%
33-3012	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	34%
51-2011	Correctional Officers and Jailers	34%
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	35%
41-1012	First-Line Supervisors of Non-Retail Sales Workers	35%
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	36%
11-9051	Food Service Managers	39%
43-5052	Postal Service Mail Carriers	41%

Priority Jobs Underrepresented by Males

Compared to the percentage of males participating in the labor force, males were significantly underrepresented in 33 priority jobs (Table 5). Occupations with the lowest representation of males were "Executive Secretaries and Executive Administrative Assistants," "Legal Secretaries and Administrative Assistants," and "Dental Hygienists." For the full list, see Appendix A (Exhibit 4).

Table 5. Priority Jobs Underrepresented by Males in San Diego County

SOC Code	Occupational Title	% Male
43-6011	Executive Secretaries and Executive Administrative Assistants	4%
43-6012	Legal Secretaries and Administrative Assistants	4%
29-1292	Dental Hygienists	7%
43-3051	Payroll and Timekeeping Clerks	11%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	12%
43-4031	Court, Municipal, and License Clerks	12%
29-2061	Licensed Practical and Licensed Vocational Nurses	13%
23-2011	Paralegals and Legal Assistants	15%
53-2031	Flight Attendants	16%
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	17%
31-2011	Occupational Therapy Assistants	17%
43-4011	Brokerage Clerks	18%
43-4061	Eligibility Interviewers, Government Programs	18%
31-9097	Phlebotomists	20%
29-2056	Veterinary Technologists and Technicians	25%
31-9099	Healthcare Support Workers, All Other	29%
43-5031	Public Safety Telecommunicators	29%
31-2021	Medical Equipment Preparers	31%
31-9093	Physical Therapist Assistants	31%
29-2055	Surgical Technologists	32%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	34%
29-2053	Psychiatric Technicians	35%
29-2034	Radiologic Technologists and Technicians	37%

SOC Code	Occupational Title	% Male
13-2082	Tax Preparers	39%
13-1031	Claims Adjusters, Examiners, and Investigators	41%
43-3061	Procurement Clerks	41%
29-1126	Real Estate Brokers	42%
41-9021	Real Estate Sales Agents	42%
41-9022	Respiratory Therapists	42%
11-9141	Property, Real Estate, and Community Association Managers	43%
43-5061	Production, Planning, and Expediting Clerks	44%
41-3021	Insurance Sales Agents	50%
19-4099	Life, Physical, and Social Science Technicians, All Other	52%

Priority Jobs Overrepresented by Ages 55+ (Retiring Workforce)

Table 6 shows that 47 priority jobs had a significant overrepresentation of workers close to retirement age (individuals ages 55 and over). The top occupations were "Postal Service Mail Carriers," "Court, Municipal, and License Clerks," and "Water and Wastewater Treatment Plant and System Operators." For the full list, see Appendix A (Exhibit 10).

Table 6. Priority Jobs Overrepresented by Ages 55+ in San Diego County

SOC Code	Description	% 55+ Years Old
43-5052	Postal Service Mail Carriers	33%
43-4031	Court, Municipal, and License Clerks	27%
51-8031	Water and Wastewater Treatment Plant and System Operators	27%
17-3023	Electrical and Electronic Engineering Technologists and Technicians	25%
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	25%
47-4051	Highway Maintenance Workers	25%
49-9041	Industrial Machinery Mechanics	25%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	24%
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	24%
43-6011	Executive Secretaries and Executive Administrative Assistants	24%
17-3026	Industrial Engineering Technologists and Technicians	24%
43-6012	Legal Secretaries and Administrative Assistants	24%
43-4061	Eligibility Interviewers, Government Programs	23%
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	23%
51-1011	First-Line Supervisors of Production and Operating Workers	23%
53-2031	Flight Attendants	23%
33-1099	First-Line Supervisors, Protective Service Workers	23%
43-3061	Procurement Clerks	23%
47-2071	Paving, Surfacing, and Tamping Equipment Operators	23%
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	22%
17-3022	Civil Engineering Technologists and Technicians	22%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	22%
47-2073	Operating Engineers and Other Construction Equipment Operators	22%

SOC Code	Description	% 55+ Years Old
11-9141	Property, Real Estate, and Community Association Managers	22%
41-9021	Real Estate Brokers	22%
41-9022	Real Estate Sales Agents	22%
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	21%
43-3051	Payroll & Timekeeping Clerks	21%
37-1012	Bus and Truck Mechanics and Diesel Engine Specialists	20%
43-1011	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	20%
49-3031	First-Line Supervisors of Office and Administrative Support Workers	20%
43-5061	Production, Planning, and Expediting Clerks	20%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	20%
13-2082	Tax Preparers	20%
53-1047	Aircraft Mechanics and Service Technicians	19%
49-3011	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	19%
29-2061	Licensed Practical and Licensed Vocational Nurses	19%
29-1126	Respiratory Therapists	19%
41-1012	Chemical Equipment Operators and Tenders	18%
51-9011	Claims Adjusters, Examiners, and Investigators	18%
13-1031	First-Line Supervisors of Non-Retail Sales Workers	18%
41-3021	Insurance Sales Agents	18%
37-2021	Pest Control Workers	18%
17-3031	Surveying and Mapping Technicians	18%
33-9093	Transportation Security Screeners	18%
17-3011	Architectural and Civil Drafters	17%
51-4121	Welders, Cutters, Solderers, and Brazers	17%

Priority Jobs Underrepresented by Race/Ethnicity

Table 7 shows the top five occupations with the lowest representation within each race/ethnic group. All race/ethnic groups were (statistically) significantly underrepresented within the occupation compared to labor force participants unless noted by *. In sum, BIPOC were significantly underrepresented in 72 priority jobs, see Appendix A (Exhibit 5 through Exhibit 9).

Table 7. Top 5 Priority Jobs Underrepresented by Race/Ethnicity in San Diego County

Race/Ethnicity	%
Hispanic / Latino	
Web Developers and Digital Interface Designers	17%
Flight Attendants	18%
Actors	19%
Life, Physical, and Social Science Technicians, All Other	20%
Occupational Therapy Assistants	21%
Black / African American	
Carpenters	2%
Dental Hygienists	2%
Drywall and Ceiling Tile Installers	2%
Floor Layers, Except Carpet, Wood, and Hard Tiles	2%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2%
Asian	
Cement Masons and Concrete Finishers	0.3%
Operating Engineers and Other Construction Equipment Operators	1%
Paving, Surfacing, and Tamping Equipment Operators	1%
Plasterers & Stucco Masons	1%
Roofers	1%
Native Hawaiian / Pacific Islander	
Occupational Therapy Assistants	0.1%*
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	0.2%
Real Estate Brokers	0.2%*
Real Estate Sales Agents	0.2%*
Procurement Clerks	0.2%*
American Indian / Alaskan Native	
Postal Service Mail Carriers	0%
Real Estate Brokers	0.1%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	0.2%*
Actors	0.2%
Chemical Equipment Operators and Tenders	0.2%

*Not statistically significant, $p<.05$

Priority Jobs Underrepresented by BIPOC Women and Men

In terms of intersectionality, Figure 6 demonstrates equity gaps within priority jobs by race/ethnicity and gender. BIPOC women were significantly underrepresented in 19 occupations, and BIPOC men were significantly underrepresented in 14 occupations.

Figure 6. Priority Jobs Underrepresented by BIPOC Women and Men in San Diego County

BIPOC Women

- Architectural and Civil Drafters
- Chemical Equipment Operators and Tenders
- Computer User Support Specialists
- Control and Valve Installers and Repairers
- Electrical Power-Line Installers and Repairers
- Electricians
- Firefighters
- First-Line Supervisors of Mechanics, Installers, and Repairers
- First-Line Supervisors of Non-Retail Sales Workers
- Heating, Air Conditioning, and Refrigeration Mechanics and Installers
- Mobile Heavy Equipment Mechanics
- Operating Engineers and Other Construction Equipment Operators
- Paving, Surfacing, and Tamping Equipment Operators
- Sales Representatives of Services
- Sales Representatives, Wholesale and Manufacturing
- Sheet Metal Workers
- Surveying and Mapping Technicians
- Water and Wastewater Treatment Plant and System Operators
- Web Developers and Digital Interface Designers

BIPOC Men

- Bookkeeping, Accounting, and Auditing Clerks
- Brokerage Clerks
- Dental Hygienists
- Executive Secretaries and Executive Administrative Assistants
- First-Line Supervisors of Office and Administrative Support Workers
- Insurance Sales Agents
- Legal Secretaries and Administrative Assistants
- Occupational Therapy Assistants
- Paralegals and Legal Assistants
- Production, Planning, and Expediting Clerks
- Property, Real Estate, and Community Association Managers
- Real Estate Sales Agents
- Real Estate Brokers
- Veterinary Technologists and Technicians

Equity Gaps in Priority Programs

For this study, equitable representation in priority programs suggests that the demographic composition of students enrolled in priority programs closely reflects the demographic composition of the regional community college student population. The statistical analysis found that females were significantly underrepresented in 40 priority programs; males in 18; ages 19 and younger in 32; BIPOC in 44; BIPOC women in 22; and BIPOC men in 2 (Table 8). Overall, 67 of the 98 priority programs (68 percent) had significant underrepresentation in enrollment for at least one group by gender and/or race/ethnicity. For the demographic composition (gender, age, race/ethnicity) in each priority program, see Appendix A (Exhibit 11 through Exhibit 18).

Table 8. Number of Priority Programs with Significant Underrepresentation by Demographic Group

Demographic Group	# of Programs with Underrepresentation
Females	40
Males	18
Ages 19 and younger	32
BIPOC	44
BIPOC Women	22
BIPOC Men	2

Program Enrollment Underrepresented by Females

Compared to overall community college enrollments, females were significantly underrepresented in 40 priority programs (Table 9). Programs with the lowest female enrollments were Construction Crafts Technology (TOP 0952.00), Carpentry (TOP 0952.10), and Electrical (TOP 0952.20). For the full list, see Appendix A (Exhibit 11).

Table 9. Priority Program Enrollment Underrepresented by Females, 2016-2017

TOP Code	Program Name	Students Enrolled	% Female
0952.00	Construction Crafts Technology	932	2%
0952.10	Carpentry	784	2%
0952.20	Electrical	1,178	3%
0956.50	Welding Technology	735	7%
2133.00	Fire Technology	3,327	7%
0950.00	Aeronautical and Aviation Technology	299	11%
0956.00	Manufacturing and Industrial Technology	91	11%
0708.00	Computer Infrastructure and Support	481	13%
0708.10	Computer Networking	341	13%
0706.00	Computer Science (Transfer)	1,710	17%
0953.00	Drafting Technology	909	18%

TOP Code	Program Name	Students Enrolled	% Female
1005.00	Commercial Music	447	18%
2105.10	Corrections	1,183	18%
2105.50	Police Academy	1,172	18%
0708.20	Computer Support	284	19%
0957.00	Civil and Construction Management Technology	263	19%
0707.00	Computer Software Development	225	21%
0957.30	Surveying	59	22%
0303.00	Environmental Technology	133	23%
0707.10	Computer Programming	2,045	24%
0104.00	Viticulture, Enology, and Wine Business	32	31%
0934.00	Electronics and Electric Technology	438	31%
0709.00	World Wide Web Administration	36	33%
0614.00	Digital Media	342	34%
0201.00	Architecture and Architectural Technology	1,048	35%
0109.30	Nursery Technology	56	36%
2105.20	Probation and Parole	67	36%
2105.30	Industrial and Transportation Security	83	36%
0701.00	Information Technology, General	7,105	38%
0109.00	Horticulture	346	40%
0614.30	Website Design and Development	897	40%
0109.10	Landscape Design and Maintenance	300	42%
2105.00	Administration of Justice	6,882	42%
2206.10	Geographic Information Systems	224	43%
2105.40	Forensics, Evidence, and Investigation	363	45%
0506.30	Management Development and Supervision	440	48%
0502.00	Accounting	10,712	50%
1030.00	Graphic Art and Design	1,615	50%
2206.00	Geography	5,507	50%
0511.00	Real Estate	1,959	51%

Program Enrollment Underrepresented by Males

Compared to overall community college enrollments, males were significantly underrepresented in 18 programs (Table 10). The programs with the lowest male representation were Medical Office Technology (TOP 0514.20), Health Information Technology (TOP 1223.00), and Fashion Merchandising (TOP 1303.20). For the full list, see Appendix A (Exhibit 12).

Table 10. Priority Program Enrollment Underrepresented by Males, 2016-2017

TOP Code	Program Name	Students Enrolled	% Male
0514.20	Medical Office Technology	881	18%
1223.00	Health Information Technology	334	18%
1303.20	Fashion Merchandising	106	18%
1208.20	Administrative Medical Assisting	347	20%
1230.00	Nursing	197	21%
1230.20	Licensed Vocational Nursing	712	21%
1210.00	Respiratory Care/Therapy	43	23%
1402.00	Paralegal	675	25%
1208.00	Medical Assisting	1,179	26%
1217.00	Surgical Technician	68	26%
0955.00	Laboratory Science Technology	85	31%
1225.00	Radiologic Technology	91	31%
0514.00	Office Technology/Office Computer Applications	7,193	33%
1401.00	Law, General	137	34%
0502.10	Tax Studies	543	35%
1307.00	Hospitality	659	36%
0430.00	Biotechnology and Biomedical Technology	694	38%
0702.10	Software Applications	1,555	40%

Program Enrollment Underrepresented by Age 19 and Younger

Compared to overall community college enrollments, individuals 19 and younger were significantly underrepresented in 32 programs (Table 11). The programs with the lowest representation from this age group were Construction Crafts Technology (TOP 0952.00), Horticulture (TOP 0109.00), and Tax Studies (TOP 0502.10). For the full list, see Appendix A (Exhibit 13).

Table 11. Priority Program Enrollment Underrepresented by Age 19 and Younger, 2016-2017

TOP Code	Program Name	Students Enrolled	% 19 and younger
0952.00	Construction Crafts Technology	932	2%
0109.00	Horticulture	346	3%
0502.10	Tax Studies	543	3%
0934.00	Electronics and Electric Technology	438	3%
0952.10	Carpentry	784	3%
0952.20	Electrical	1,178	3%
0109.10	Landscape Design and Maintenance	300	4%
0957.00	Civil and Construction Management Technology	263	4%
0958.00	Water and Wastewater Technology	577	4%
1402.00	Paralegal	675	4%
0614.30	Website Design and Development	897	5%
0707.00	Computer Software Development	225	5%
0708.00	Computer Infrastructure and Support	481	5%
2133.50	Fire Academy	227	5%
0511.00	Real Estate	1,959	6%
0514.00	Office Technology/Office Computer Applications	7,193	6%
0708.10	Computer Networking	341	6%
0946.00	Environmental Control Technology	417	6%
0514.20	Medical Office Technology	881	7%
0950.00	Aeronautical and Aviation Technology	299	7%
1230.20	Licensed Vocational Nursing	712	7%
0430.00	Biotechnology and Biomedical Technology	694	8%
0702.10	Software Applications	1,555	8%

TOP Code	Program Name	Students Enrolled	% 19 and younger
2133.00	Fire Technology	3,327	8%
0509.00	Marketing and Distribution	1,497	11%
0947.00	Diesel Technology	255	11%
0506.30	Management Development and Supervision	440	12%
0702.00	Computer Information Systems	289	12%
0953.00	Drafting Technology	909	13%
0956.50	Welding Technology	735	13%
0502.00	Accounting	10,712	14%
0701.00	Information Technology, General	7,105	15%

Program Enrollment Underrepresented by Race/Ethnicity

Table 12 shows the top five priority programs with the lowest representation within each race/ethnic group. All race/ethnic groups were (statistically) significantly underrepresented within that program compared to the community college student population unless noted by *. In sum, BIPOC were significantly underrepresented in 44 priority programs, see Appendix A (Exhibit 14 through Exhibit 18).

Table 12. Top 5 Priority Program Enrollment Underrepresented by Race/Ethnicity, 2016-2017

TOP Code	Program Name	%
Hispanic / Latino		
1299.00	Other Health Occupations	14%
1401.00	Law, General	17%
0934.00	Electronics and Electric Technology	23%
0707.00	Computer Software Development	24%
0708.20	Computer Support	25%
Black / African American		
2133.00	Fire Technology	2%
0201.00	Architecture and Architectural Technology	3%
0502.10	Tax Studies	3%
0706.00	Computer Science (Transfer)	3%
0953.00	Drafting Technology	3%
Asian		
0952.10	Carpentry	1%
0956.50	Welding Technology	1%
0952.20	Electrical	2%
1005.00	Commercial Music	2%
2105.10	Corrections	2%
Native Hawaiian / Pacific Islander[20]		
0701.00	Information Technology, General	0.4%*
0514.00	Office Technology/Office Computer Applications	0.5%*
2206.00	Geography	0.5%*
0502.00	Accounting	0.6%*
American Indian / Alaskan Native		
0502.00	Accounting	0.2%
0701.00	Information Technology, General	0.3%*
0514.00	Office Technology/Office Computer Applications	0.4%*
2105.00	Administration of Justice	0.5%*
2206.00	Geography	0.5%*

*Not statistically significant, $p<.05$.

[20] Data was not available for all programs for Native Hawaiian / Pacific Islander students and the top four programs are presented.

Program Enrollment Underrepresented by BIPOC Women and Men

In terms of intersectionality, Figure 7 demonstrates equity gaps based on race/ethnicity and gender in priority program enrollment: 22 TOP codes were underrepresented by BIPOC women, and two were underrepresented by BIPOC men.

Figure 7. Priority Program Enrollment Underrepresented by BIPOC Women and BIPOC Men[21]

BIPOC Women

- Accounting
- Aeronautical and Aviation Technology
- Architecture and Architectural Technology
- Computer Infrastructure and Support
- Computer Science (Transfer)
- Corrections
- Drafting Technology
- Electrical
- Electrical Systems and Power Transmission
- Electronics and Electric Technology
- Fire Technology
- Horticulture
- Information Technology, General
- Landscape Design and Maintenance
- Nursery Technology
- Police Academy
- Real Estate
- Surveying
- Viticulture, Enology, and Wine Business
- Website Design and Development
- Welding Technology
- Wildland Fire Technology

BIPOC Men

- Law, General
- Licensed Vocational Nursing

[21] LaunchBoard, 2016 – 2017. Five programs had insufficient information on both gender and race: Turfgrass technology, energy systems technology, Industrial and occupational safety and health, other engineering and related industrial technologies, and hospital central service technician

Findings and Recommendations

The purpose of this report was to identify equity gaps in priority jobs and programs by analyzing demographic data from the labor market and postsecondary education. This section highlights key findings from the demographic analyses and provides recommendations for the community colleges' diversity, equity, inclusion, and belonging[22] strategies, particularly in their targeted recruitment and retention efforts.

The community colleges should work with employers to diversify employment in priority jobs and increase underrepresented groups' interest in these positions. Analyses showed that all 91 priority jobs had underrepresentation of at least one demographic group or overrepresentation of individuals aged 55 or older (i.e., retiring workforce). Table 13 below summarizes the significantly under- and overrepresented groups across the 91 priority jobs. The community colleges can use this information to help employers diversify their workforce, particularly in roles with employees near retirement. For example, the colleges could partner with employers to train and recruit more females as "Aircraft Mechanics and Service Technicians," as these positions have significant overrepresentation of a retiring workforce and an underrepresentation of female workers (Table 13).

REFLECTION QUESTIONS FOR EMPLOYERS

- Do you currently employ or plan to hire for any of the priority jobs listed in Table 13?
- Does your organization have similar underrepresented groups in priority jobs?
- Which of your priority jobs have a retiring workforce?
- How could you partner with the community colleges to develop and diversify your talent pipeline, particularly in priority jobs with underrepresented groups?

Community colleges should develop targeted recruitment and retention strategies for priority programs with significantly underrepresented groups. Statistical analyses revealed that 67 of the 98 priority programs (68 percent) had at least one underrepresented demographic group in terms of age, gender, or race/ethnicity (Table 14 lists these programs). The community colleges can use this information to create targeted marketing campaigns for specific demographics. For example, the Hispanic/Latino group was underrepresented in the Information & Communications Technology (ICT) sector, particularly in occupations such as "Web Developers and Digital Interface Designers," "Computer User Support Specialists," and "Computer Network Support Specialists" and in programs such as Computer Software Development (TOP 0707.00) and Computer Support (TOP 0708.20).

However, simply recruiting for underrepresented groups is not enough. Colleges should seek input from students (e.g., BIPOC, women, youth) to determine the best strategies for retaining them and fostering true representation

[22] Also known as Equity, Diversity, Inclusion, and Belonging (EDIB). developingchild.harvard.edu/equity-diversity-inclusion-and-belonging

in priority jobs and programs. For colleges seeking to identify which priority programs are offered at their institutions, Table 15 provides a list of priority programs (TOP codes) and community colleges with active programs as of 2021. The colleges should note that the information presented in Table 15 came from public resources and databases such as the California Community Colleges Chancellor's Office LaunchBoard.[23] Any inaccurate information should be reported to COE staff.

REFLECTION QUESTIONS FOR COMMUNITY COLLEGES

- What are some ways a marketing campaign could help community colleges increase enrollments of underrepresented groups in priority programs (Table 14)?
- Does your college offer a course or program in any of the TOP codes listed in Table 15? If so, does your college have similar underrepresented groups as shown in Table 14?
- Besides enrollments, do you observe any equity gaps in terms of retention and completion of courses or programs with the TOP codes listed in Table 14?
- What efforts has your college made to support underrepresented populations and promote completion and retention in priority programs?
- How could your college design programs to recruit and retain underrepresented groups?
- What successes has your college experienced with targeted marketing campaigns for specific demographic groups (e.g., women, BIPOC, youth)? How could you apply those strategies to promote priority programs to underrepresented groups?
- Has your college worked with industry and local employers to promote hiring of underrepresented groups?

Conclusion and Limitations

As labor market demand for priority jobs rises, the community colleges are essential in ensuring employers have a diverse talent pipeline by eliminating equity gaps in priority programs. Knowing the demographics (gender, age, race/ethnicity) within priority jobs and programs can help the region build a more representative workforce. The COE commissioned this study with the expectation that more equitable enrollment in priority programs would result in more equitable representation in priority jobs. Due to data limitations, this study should be used to prioritize targeted recruitment and retention strategies that address equity gaps in programs. **The San Diego and Imperial Counties Community Colleges should not use this report for program development.**

[23] calpassplus.org/LaunchBoard/Community-College-Pipeline.aspx

Table 13. Statistically Significant Under- or Overrepresentation by Demographic Group (Priority Jobs)

Priority Job	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 55+ (Over-represented)
Actors			•			
Aircraft Mechanics and Service Technicians	•					•
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	•					•
Architectural and Civil Drafters	•		•	•		•
Bookkeeping, Accounting, and Auditing Clerks		•	•		•	•
Brokerage Clerks		•			•	
Bus and Truck Mechanics and Diesel Engine Specialists	•		•			•
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	•		•			•
Carpenters	•		•			
Cement Masons and Concrete Finishers	•		•			
Chemical Equipment Operators and Tenders	•		•	•		•
Civil Engineering Technologists and Technicians	•					•
Claims Adjusters, Examiners, and Investigators		•	•			•
Computer Network Support Specialists	•		•			
Computer User Support Specialists	•		•	•		
Control and Valve Installers and Repairers, Except Mechanical Door	•		•	•		•
Correctional Officers and Jailers	•		•			
Court, Municipal, and License Clerks		•				•
Dental Hygienists		•	•		•	
Detectives and Criminal Investigators	•		•			
Drywall and Ceiling Tile Installers	•		•			
Electrical and Electronic Engineering Technologists and Technicians	•		•			•
Electrical Power-Line Installers and Repairers	•		•	•		
Electricians	•		•	•		

Priority Job	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 55+ (Over-represented)
Eligibility Interviewers, Government Programs		•				•
Environmental Science and Protection Technicians, Including Health			•			
Executive Secretaries and Executive Administrative Assistants		•	•		•	•
Firefighters	•		•	•		
First-Line Supervisors of Housekeeping and Janitorial Workers	•		•			•
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	•		•			•
First-Line Supervisors of Mechanics, Installers, and Repairers	•		•	•		•
First-Line Supervisors of Non-Retail Sales Workers	•		•	•		•
First-Line Supervisors of Office and Administrative Support Workers		•	•		•	•
First-Line Supervisors of Production and Operating Workers	•		•			•
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	•		•			•
First-Line Supervisors, Protective Service Workers	•		•			•
Flight Attendants		•	•			•
Floor Layers, Except Carpet, Wood, and Hard Tiles	•		•			
Food Service Managers	•					
Glaziers	•		•			
Healthcare Support Workers, All Other		•				
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	•		•	•		
Highway Maintenance Workers	•		•			•
Human Resources Assistants, Except Payroll and Timekeeping		•				
Industrial Engineering Technologists and Technicians	•		•			•
Industrial Machinery Mechanics	•		•			•
Insurance Sales Agents		•	•		•	•
Legal Secretaries and Administrative Assistants		•	•		•	•
Licensed Practical and Licensed Vocational Nurses		•				•

Priority Job	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 55+ (Over-represented)
Life, Physical, and Social Science Technicians, All Other		•	•			
Medical Equipment Preparers		•				
Mobile Heavy Equipment Mechanics, Except Engines	•		•	•		•
Occupational Therapy Assistants		•	•		•	
Operating Engineers and Other Construction Equipment Operators	•		•	•		•
Paralegals and Legal Assistants		•	•		•	
Paving, Surfacing, and Tamping Equipment Operators	•		•	•		•
Payroll & Timekeeping Clerks		•	•			•
Pest Control Workers	•		•			•
Phlebotomists		•				
Physical Therapist Assistants		•	•			
Plasterers & Stucco Masons	•		•			
Plumbers, Pipefitters, and Steamfitters	•		•			
Police and Sheriffs Patrol Officers	•		•			
Postal Service Mail Carriers	•		•			•
Procurement Clerks		•	•			•
Production, Planning, and Expediting Clerks		•			•	•
Property, Real Estate, and Community Association Managers		•	•		•	•
Psychiatric Technicians		•				
Public Safety Telecommunicators		•	•			
Radiologic Technologists and Technicians		•				
Real Estate Sales Agents		•	•			•
Real Estate Brokers		•	•		•	•
Respiratory Therapists		•	•			•
Roofers	•		•			

Priority Job	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 55+ (Over-represented)
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	•		•	•		•
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	•		•	•		
Security and Fire Alarm Systems Installers	•		•			
Sheet Metal Workers	•		•	•		
Solar Photovoltaic Installers	•		•			
Structural Iron and Steel Workers	•		•			
Surgical Technologists		•				
Surveying and Mapping Technicians	•		•	•		•
Tax Preparers		•				•
Telecommunications Equipment Installers and Repairers, Except Line Installers	•		•			
Telecommunications Line Installers and Repairers	•		•			
Transportation Security Screeners	•					•
Tree Trimmers & Pruners	•		•			
Veterinary Technologists and Technicians		•	•		•	
Water and Wastewater Treatment Plant and System Operators	•		•	•		•
Web Developers and Digital Interface Designers	•		•	•		
Welders, Cutters, Solderers, and Brazers	•					•

Table 14. Statistically Significant Underrepresentation by Demographic Group (Priority Programs)

Data Not Available for All Programs

TOP Code	Priority Program	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 19 or Younger
0502.00	Accounting	•		•	•		•
1208.20	Administrative Medical Assisting		•				
2105.00	Administration of Justice	•		•			
0950.00	Aeronautical and Aviation Technology	•		•	•		•
0201.00	Architecture and Architectural Technology	•		•	•		
0430.00	Biotechnology and Biomedical Technology		•				•
0952.10	Carpentry	•		•			•
0957.00	Civil and Construction Management Technology	•					•
1005.00	Commercial Music	•		•			
0702.00	Computer Information Systems			•			•
0708.00	Computer Infrastructure and Support	•		•	•		•
0708.10	Computer Networking	•		•			•
0707.10	Computer Programming	•		•			
0706.00	Computer Science (Transfer)	•		•	•		
0707.00	Computer Software Development	•		•			•
0708.20	Computer Support	•		•			
0952.00	Construction Crafts Technology	•		•			•
2105.10	Corrections	•		•	•		
1240.20	Dental Hygienist			•			
0947.00	Diesel Technology						•
0614.00	Digital Media	•		•			
0953.00	Drafting Technology	•		•	•		•
1007.00	Dramatic Arts			•			

TOP Code	Priority Program	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 19 or Younger
0952.20	Electrical	•		•	•		•
0934.40	Electrical Systems and Power Transmission				•		
0934.00	Electronics and Electric Technology	•		•	•		•
0946.00	Environmental Control Technology						•
0303.00	Environmental Technology	•					
1303.20	Fashion Merchandising		•				
2133.50	Fire Academy			•			•
2133.00	Fire Technology	•		•	•		•
2105.40	Forensics, Evidence, and Investigation	•					
2206.10	Geographic Information Systems	•					
2206.00	Geography	•		•			
1030.00	Graphic Art and Design	•		•			
1223.00	Health Information Technology		•				
0109.00	Horticulture	•		•	•		•
1307.00	Hospitality		•	•			
2105.30	Industrial and Transportation Security	•					
0701.00	Information Technology, General	•		•	•		•
0955.00	Laboratory Science Technology		•				
0109.10	Landscape Design and Maintenance	•		•	•		•
1401.00	Law, General		•	•		•	
1230.20	Licensed Vocational Nursing		•	•		•	•
0506.30	Management Development and Supervision	•		•			•
0956.00	Manufacturing and Industrial Technology	•					
0509.00	Marketing and Distribution			•			•
1208.00	Medical Assisting		•	•			
0514.20	Medical Office Technology		•	•			•

TOP Code	Priority Program	Female	Male	BIPOC	BIPOC Women	BIPOC Men	Ages 19 or Younger
0109.30	Nursery Technology	•			•		
1230.00	Nursing		•				
0514.00	Office Technology/Office Computer Applications		•	•			•
1299.00	Other Health Occupations			•			
1402.00	Paralegal		•	•			•
2105.50	Police Academy	•		•	•		
2105.20	Probation and Parole	•					
1225.00	Radiologic Technology		•	•			
0511.00	Real Estate	•		•	•		•
1210.00	Respiratory Care/Therapy		•				
0702.10	Software Applications		•				•
1217.00	Surgical Technician		•				
0957.30	Surveying	•			•		
0502.10	Tax Studies		•	•			•
0104.00	Viticulture, Enology, and Wine Business	•			•		
0958.00	Water and Wastewater Technology						•
0614.30	Website Design and Development	•		•	•		•
0956.50	Welding Technology	•		•	•		•
0709.00	World Wide Web Administration	•			•		

Table 15. Community Colleges Offering Priority Programs with Statistically Significant Underrepresentation[24]

TOP Code	Priority Program	Cuyamaca	Grossmont	MiraCosta	Palomar	SD Cont. Ed.	City	Mesa	Miramar	South-western
0104.00	Viticulture, Enology, and Wine Business	●		●						
0109.00	Horticulture	●		●						●
0109.10	Landscape Design and Maintenance	●		●						●
0109.30	Nursery Technology	●		●						●
0201.00	Architecture and Architectural Technology			●	●			●		●
0303.00	Environmental Technology	●					●			●
0430.00	Biotechnology and Biomedical Technology			●			●		●	●
0502.00	Accounting	●		●	●	●	●	●	●	●
0502.10	Tax Studies								●	●
0506.30	Management Development and Supervision		●	●				●		●
0509.00	Marketing and Distribution		●	●				●		●
0511.00	Real Estate	●			●		●	●		●
0514.00	Office Technology/Office Computer Applications	●	●	●	●	●		●	●	●
0514.20	Medical Office Technology				●	●		●		
0614.00	Digital Media				●	●				
0614.30	Website Design and Development	●		●	●	●		●		●
0701.00	Information Technology, General		●	●	●					
0702.00	Computer Information Systems			●	●			●		●
0702.10	Software Applications		●	●		●	●			●
0706.00	Computer Science (Transfer)	●		●	●			●	●	●
0707.00	Computer Software Development		●	●	●	●				

[24] Not all TOP codes with underrepresentation in 2016-2017 had active programs in 2021 and are not listed in Table 15.

TOP Code	Priority Program	Cuyamaca	Grossmont	MiraCosta	Palomar	SD Cont. Ed.	City	Mesa	Miramar	South-western
0707.10	Computer Programming		•		•		•			•
0707.30	Computer Systems Analysis					•				
0708.00	Computer Infrastructure and Support		•	•	•	•	•			
0708.10	Computer Networking	•	•	•	•	•				•
0708.20	Computer Support			•		•				•
0709.00	World Wide Web Administration					•				
0934.00	Electronics and Electric Technology					•	•			
0934.40	Electrical Systems and Power Transmission						•			
0946.00	Environmental Control Technology				•	•	•			
0947.00	Diesel Technology				•	•			•	
0950.00	Aeronautical and Aviation Technology								•	
0952.10	Carpentry				•					
0952.20	Electrical				•					
0953.00	Drafting Technology			•	•		•			•
0955.00	Laboratory Science Technology									•
0956.00	Manufacturing and Industrial Technology				•	•	•			
0956.50	Welding Technology				•	•				
0957.00	Civil and Construction Management Technology							•		•
0957.30	Surveying	•								
0958.00	Water and Wastewater Technology	•			•					
1005.00	Commercial Music			•			•		•	•
1007.00	Dramatic Arts		•	•	•		•	•		•
1030.00	Graphic Art and Design	•			•	•	•			•
1208.00	Medical Assisting							•		•
1208.20	Administrative Medical Assisting			•		•				•
1210.00	Respiratory Care/Therapy		•							

TOP Code	Priority Program	Cuyamaca	Grossmont	MiraCosta	Palomar	SD Cont. Ed.	City	Mesa	Miramar	South-western
1217.00	Surgical Technician			•						•
1223.00	Health Information Technology							•		
1225.00	Radiologic Technology							•		
1230.20	Licensed Vocational Nursing			•						•
1240.20	Dental Hygienist									•
1299.00	Other Health Occupations				•			•		
1303.20	Fashion Merchandising				•	•		•		
1307.00	Hospitality		•	•				•		•
1401.00	Law, General			•	•		•			•
1402.00	Paralegal	•								•
2105.00	Administration of Justice		•	•	•				•	•
2105.10	Corrections		•						•	•
2105.30	Industrial and Transportation Security		•		•					
2105.40	Forensics, Evidence, and Investigation		•		•				•	
2105.50	Police Academy				•					•
2133.00	Fire Technology				•				•	•
2133.50	Fire Academy				•					•
2206.00	Geography		•		•		•	•		•
2206.10	Geographic Information Systems				•			•		•

Appendix A: Data Tables

Exhibit 1. Annual Openings, Entry-Level Wages, and Typical Education for Priority Jobs, 2022-2027[25]

SOC Code	Occupational Title	Annual Job Openings	Entry-Level Wages	Typical Entry-Level Education
27-2011	Actors	53	$23.34	Some college
49-3011	Aircraft Mechanics and Service Technicians	191	$28.89	Certificate
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	160	$21.41	HS
17-3011	Architectural and Civil Drafters	144	$25.96	Associate
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,445	$18.76	Some college
43-4011	Brokerage Clerks	57	$23.70	HS
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	138	$23.30	HS
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	141	$28.39	Associate
47-2031	Carpenters	733	$22.02	HS
47-2051	Cement Masons and Concrete Finishers	194	$24.06	None
51-9011	Chemical Equipment Operators and Tenders	112	$18.84	HS
17-3022	Civil Engineering Technologists and Technicians	81	$22.67	Associate
13-1031	Claims Adjusters, Examiners, and Investigators	180	$28.46	HS
15-1231	Computer Network Support Specialists	101	$24.08	Associate
15-1232	Computer User Support Specialists	376	$22.72	Some college
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	53	$28.37	HS
33-3012	Correctional Officers and Jailers	318	$30.85	HS
43-4031	Court, Municipal, and License Clerks	66	$18.75	HS
29-1292	Dental Hygienists	111	$45.66	Associate
33-3021	Detectives and Criminal Investigators	244	$46.78	HS
47-2081	Drywall and Ceiling Tile Installers	265	$21.40	None
17-3023	Electrical and Electronic Engineering Technologists and Technicians	241	$28.39	Associate
49-9051	Electrical Power-Line Installers and Repairers	80	$40.66	HS
47-2111	Electricians	805	$23.25	HS
43-4061	Eligibility Interviewers, Government Programs	210	$20.98	HS
19-4042	Environmental Science and Protection Technicians, Including Health	96	$18.73	Associate
43-6011	Executive Secretaries and Executive Administrative Assistants	445	$25.03	HS
33-2011	Firefighters	269	$27.92	Certificate
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	139	$18.65	HS
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	92	$21.50	HS
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	298	$27.37	HS

[25] Lightcast (formerly EMSI); QCEW, Non-QCEW, Self-Employed. SDWP pulled the labor market occupational data on January 6, 2022.

SOC Code	Occupational Title	Annual Job Openings	Entry-Level Wages	Typical Entry-Level Education
41-1012	First-Line Supervisors of Non-Retail Sales Workers	153	$28.09	HS
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,277	$23.33	HS
51-1011	First-Line Supervisors of Production and Operating Workers	446	$26.01	HS
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	365	$19.57	HS
53-2031	Flight Attendants	112	$21.96	HS
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	77	$23.74	None
11-9051	Food Service Managers	294	$21.53	HS
47-2121	Glaziers	57	$29.03	HS
31-9099	Healthcare Support Workers, All Other	168	$20.27	HS
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	220	$25.77	Certificate
47-4051	Highway Maintenance Workers	74	$19.52	HS
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	111	$18.70	Associate
17-3026	Industrial Engineering Technologists and Technicians	54	$26.42	Associate
49-9041	Industrial Machinery Mechanics	226	$25.62	HS
41-3021	Insurance Sales Agents	346	$19.14	HS
43-6012	Legal Secretaries and Administrative Assistants	266	$21.44	HS
29-2061	Licensed Practical and Licensed Vocational Nurses	567	$27.50	Certificate
19-4099	Life, Physical, and Social Science Technicians, All Other	98	$24.04	Associate
31-9093	Medical Equipment Preparers	55	$21.78	HS
33-1099	First-Line Supervisors, Protective Service Workers	74	$19.50	HS
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	108	$26.19	HS
31-2011	Occupational Therapy Assistants	72	$30.04	Associate
47-2073	Operating Engineers and Other Construction Equipment Operators	232	$27.06	HS
23-2011	Paralegals and Legal Assistants	333	$26.40	Associate
47-2071	Paving, Surfacing, and Tamping Equipment Operators	60	$22.41	HS
43-3051	Payroll & Timekeeping Clerks	145	$22.31	HS
37-2021	Pest Control Workers	169	$20.47	HS
31-9097	Phlebotomists	183	$20.51	Certificate
31-2021	Physical Therapist Assistants	141	$29.45	Associate
47-2161	Plasterers & Stucco Masons	51	$21.52	None
47-2152	Plumbers, Pipefitters, and Steamfitters	529	$22.48	HS
33-3051	Police and Sheriffs Patrol Officers	458	$34.41	HS
43-5052	Postal Service Mail Carriers	178	$20.08	HS
43-3061	Procurement Clerks	55	$20.67	HS
43-5061	Production, Planning, and Expediting Clerks	506	$20.47	HS
11-9141	Property, Real Estate, and Community Association Managers	290	$24.27	HS
29-2053	Psychiatric Technicians	74	$23.39	Certificate

SOC Code	Occupational Title	Annual Job Openings	Entry-Level Wages	Typical Entry-Level Education
43-5031	Public Safety Telecommunicators	64	$25.60	HS
29-2034	Radiologic Technologists and Technicians	146	$30.53	Associate
41-9021	Real Estate Brokers	51	$28.97	HS
41-9022	Real Estate Sales Agents	71	$25.76	HS
29-1126	Respiratory Therapists	88	$33.43	Associate
47-2181	Roofers	196	$20.07	None
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	1,312	$19.18	HS
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	933	$20.63	HS
49-2098	Security and Fire Alarm Systems Installers	76	$18.96	HS
47-2211	Sheet Metal Workers	191	$24.85	HS
47-2231	Solar Photovoltaic Installers	101	$21.10	HS
47-2221	Structural Iron and Steel Workers	55	$26.95	HS
29-2055	Surgical Technologists	59	$26.46	Certificate
17-3031	Surveying and Mapping Technicians	77	$25.03	HS
13-2082	Tax Preparers	70	$18.49	HS
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	320	$28.16	Certificate
49-9052	Telecommunications Line Installers and Repairers	98	$26.33	HS
33-9093	Transportation Security Screeners	59	$21.07	HS
37-3013	Tree Trimmers & Pruners	130	$19.39	HS
29-2056	Veterinary Technologists and Technicians	129	$19.50	Associate
51-8031	Water and Wastewater Treatment Plant and System Operators	79	$27.52	HS
15-1257	Web Developers and Digital Interface Designers	132	$26.83	Associate
51-4121	Welders, Cutters, Solderers, and Brazers	415	$20.04	HS

Exhibit 2. TOP Codes, Enrollment, Award Type, and Units for Priority Programs in San Diego Community Colleges[26,27,28]

Data Not Available for All Programs

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
0102.10	Veterinary Technician (Licensed)	54	San Diego Mesa		•					42
0104.00	Viticulture, Enology, and Wine Business	32	MiraCosta		•		•		29.5	29.5
0109.00	Horticulture	346	Cuyamaca		•		•		32	32
			MiraCosta		•		•		31.00-44.00	31.00-44.00
			Southwestern		•					18.00-20.00
0109.10	Landscape Design and Maintenance	300	Cuyamaca		•		•		31.00-36.00	31.00-36.00
			MiraCosta	•			•		31	31
			Southwestern		•		•		35.00-39.00	36.00-39.00
0109.30	Nursery Technology	56	Cuyamaca		•		•		32.00-33.00	32.00-33.00
			MiraCosta	•			•		27	27
			Southwestern		•		•		36.5	36.5
0109.40	Turfgrass Technology	13	Cuyamaca		•		•		32	32
			Southwestern		•		•		36	36
0201.00	Architecture and Architectural Technology	1,048	MiraCosta	•			•		32	32
			Palomar		•		•		18.00-27.00	27
			San Diego Mesa		•					23.00-41.00
			Southwestern		•		•		31	31.00-40.00
0301.00	Environmental Science	561	Cuyamaca			•				40.00-41.00
0303.00	Environmental Technology	133	Cuyamaca		•		•		27	41
			San Diego City		•		•		18.00-24.00	18.00-24.00

[26] San Diego and Imperial Counties Community Colleges Catalog, 2021. Data was pulled from Chancellor's Office Curriculum Inventory (COCI) 2.0. Only active programs are listed and note that the status of these programs may have changed since the data was pulled; some programs may no longer be active or new programs may exist. Also note that an existing program may be related but listed under a different TOP code. For example, many nursing programs in the region are listed under TOP 1230.10 Registered Nursing, but no existing programs are under TOP 1230.00 Nursing. coci2.ccctechcenter.org/programs

[27] LaunchBoard, "Students Enrolled, 2016-2017." Please note that numbers are frequently updated and these numbers may have changed since the data was pulled. Also, enrollment data for some programs may have been analyzed, but data was not available about existing program in 2021 and/or the programs no longer existed. calpassplus.org/LaunchBoard/Community-College-Pipeline.aspx

[28] These numbers are not unduplicated. Students can enroll in multiple courses in a single TOP code.

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
			Southwestern		•		•		27	40.00-42.00
0430.00	Biotechnology and Biomedical Technology	694	MiraCosta		•		•		13.00-39.00	35.00-39.00
			San Diego City		•					30
			San Diego Miramar		•					21
			Southwestern		•		•		28.00-33.00	28.00-33.01
0502.00	Accounting	10,712	Cuyamaca		•		•		16.00-33.00	33
			MiraCosta	•			•		25.00-35.50	25.00-35.50
			Palomar		•		•		31.00-32.00	31.00-32.00
			San Diego City		•		•		16	25.00-26.00
			San Diego Mesa		•		•		23	39
			San Diego Miramar		•		•		22	37
			Southwestern	•	•		•		21.00-30.00	32.00-37.00
0502.10	Tax Studies	10,712	San Diego Miramar				•		12	
			Southwestern							
0506.30	Management Development and Supervision	440	Southwestern		•		•		32.00-37.00	42.00-48.00
			Grossmont		•		•		30	30
			MiraCosta	•			•		21	21
			San Diego Mesa		•		•		29	42
			Southwestern	•			•		18	35
0509.00	Marketing and Distribution	1,497	Grossmont		•		•		30	30
			MiraCosta	•			•		21	21
			San Diego Mesa		•		•		29	42
			Southwestern	•			•		8	35
0509.40	Sales and Salesmanship	245	N/A							
0509.60	Display	120	N/A							
0509.70	E-Commerce (Business emphasis)	56	Southwestern				•		16	
0511.00	Real Estate	1,959	Cuyamaca		•		•		22.00-26.00	22.00-26.00
			Palomar		•		•		28	28
			San Diego City				•		24.00-25.00	
			San Diego Mesa		•					27.00-28.00

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
			Southwestern	•	•		•		24.00-31.00	26.00-29.00
0512.00	Insurance	91	Southwestern		•		•		23	44
0514.00	Office Technology/Office Computer Applications	7,193	Cuyamaca		•		•		16.00-31.50	22.00-31.50
			Grossmont		•		•		15.00-30.00	24.00-33.00
			MiraCosta		•		•	•	19	19
			Palomar		•		•		12.00-25.00	25
			San Diego Cont. Ed.					•		
			San Diego Mesa				•		16.00-26.00	
			San Diego Miramar		•		•		18	22
			Southwestern		•		•		16.50-32.50	22.50-32.50
0514.10	Legal Office Technology	24	San Diego Mesa		•		•		26	28
			Southwestern		•		•		13.50-29.50	30.00-49.50
0514.20	Medical Office Technology	881	Palomar		•		•		18.00-20.00	18.00-20.00
			San Diego Cont. Ed.							
			San Diego Mesa		•		•		26.00-31.00	26.00-31.00
0614.00	Digital Media	342	Palomar		•		•		18.00-30.00	23.00-30.00
			San Diego Cont. Ed.					•		
0614.30	Website Design and Development	897	Cuyamaca		•		•		29.00-34.00	29.00-34.00
			MiraCosta	•			•		30	30
			Palomar		•		•		8.00-26.00	26
			San Diego Cont. Ed.							
			San Diego Mesa		•		•		18.00-24.00	33
			Southwestern		•		•		11.00-27.00	19.00-24.00
0701.00	Information Technology, General	7,105	Grossmont		•		•		17.00-19.00	19
			MiraCosta		•		•		25.00-26.00	25.00-26.00
			Palomar		•					28
0702.00	Computer Information Systems	289	MiraCosta		•		•		30.00-31.00	30.00-31.01
			Palomar		•		•		29.00-38.00	29.00-38.00
			San Diego Mesa		•		•		31.00-31.99	31.00-32.00
			Southwestern	•						32

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
0702.10	Software Applications	1,555	Grossmont		•		•		35.5	35.5
			MiraCosta		•		•		24.00-28.00	28
			San Diego Cont. Ed.							
			San Diego City		•		•		16.00-17.00	29.00-30.00
			Southwestern				•		14.00-40.00	
0706.00	Computer Science (Transfer)	1,710	Cuyamaca			•				33
			MiraCosta			•				30
			Palomar		•		•		26.00-27.00	26.00-27.00
			San Diego Mesa			•				33
			San Diego Miramar			•				33
			Southwestern	•		•				31.00-32.00
0707.00	Computer Software Development	225	Grossmont				•		17.00-18.00	
			MiraCosta	•			•		24	24.01
			Palomar		•					31
			San Diego Cont. Ed.					•		
0707.10	Computer Programming	2,045	Grossmont		•		•		28.00-30.00	28.00-30.00
			Palomar				•		12.00-31.00	
			San Diego City		•		•		16.00-28.00	28
			Southwestern		•		•		46.00-48.00	48.00-55.00
0707.30	Computer Systems Analysis	103	San Diego Cont. Ed.					•		
0708.00	Computer Infrastructure and Support	481	Grossmont		•		•		21.00-26.00	21.00-26.00
			MiraCosta		•		•		20.00-26.00	20.00-26.00
			Palomar		•		•		12.00-24.00	28
			San Diego Cont. Ed.					•		
			San Diego City		•		•		18.00-32.00	30.00-32.00
0708.10	Computer Networking	341	Cuyamaca		•		•		34.50-40.00	34.50-40.00
			Grossmont		•		•		39	39
			MiraCosta							
			Palomar		•		•		25.00-28.00	25.00-28.00
			San Diego Cont. Ed.					•		

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
			Southwestern		•					42.00-44.00
0708.20	Computer Support	284	MiraCosta		•		•		22.99	23
			San Diego Cont. Ed.					•		
			Southwestern		•					23.00-25.00
0709.00	World Wide Web Administration	36	San Diego Cont. Ed.							
0709.10	E-Commerce (Technology emphasis)	67	MiraCosta		•		•		22.00-23.00	22.00-23.01
			Southwestern		•					21.00-40.00
0934.00	Electronics and Electric Technology	438	San Diego Cont. Ed.							
			San Diego City		•		•		27.00-32.00	32
0934.40	Electrical Systems and Power Transmission	40	San Diego City		•		•		20.00-36.00	20.00-36.00
0946.00	Environmental Control Technology	417	Palomar		•		•		16	27.00-31.00
			San Diego Cont. Ed.							
			San Diego City		•		•		19.00-33.00	24.00-36.00
0946.10	Energy Systems Technology	47	San Diego Cont. Ed.							
			Southwestern		•		•		19	19
0947.00	Diesel Technology	255	Palomar		•		•		32	32
			San Diego Cont. Ed.							
			San Diego Miramar		•		•		18.00-32.00	24
0947.20	Heavy Equipment Maintenance	32	San Diego Miramar		•		•		48	48
0950.00	Aeronautical and Aviation Technology	299	San Diego Miramar		•		•		18.00-78.00	18.00-78.00
0950.10	Aviation Airframe Mechanics	70	San Diego Miramar		•		•		47	78
0950.20	Aviation Powerplant Mechanics	40	San Diego Miramar		•		•		52.5	52.5
0952.00	Construction Crafts Technology	932	N/A							
0952.10	Carpentry	784	Palomar		•		•		28	28
0952.20	Electrical	1,178	Palomar		•		•		40.00-56.00	40.00-56.00
0952.30	Plumbing, Pipefitting and Steamfitting	285	San Diego Cont. Ed.							
0952.60	Masonry, Tile, Cement, Lath and Plaster	44	Palomar		•		•		25.5	25.5
0952.80	Drywall and Insulation	565	Palomar		•		•		21.00-26.50	21.00-26.50

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
0953.00	Drafting Technology	909	MiraCosta	•	•		•		24.00-35.00	24.00-35.01
			Palomar		•		•		9.00-29.00	24.00-29.00
			San Diego City				•		19	
			Southwestern		•		•		18.00-21.00	18.00-21.01
0955.00	Laboratory Science Technology	85	Southwestern		•		•		37.00-38.00	37.00-38.00
0956.00	Manufacturing and Industrial Technology	91	Palomar		•					29.00-30.00
			San Diego Cont. Ed.							
			San Diego City		•		•		28.00-32.00	32.00-36.00
0956.50	Welding Technology	735	Palomar		•		•		30	30
			San Diego Cont. Ed.							
0956.70	Industrial and Occupational Safety and Health	93	Cuyamaca		•		•		26	41
			Palomar					•		
			Southwestern		•		•		18	33.00-37.00
0957.00	Civil and Construction Management Technology	263	San Diego Mesa		•					30
			Southwestern		•		•		36	33
0957.30	Surveying	59	Cuyamaca		•		•		27.00-28.00	27.00-28.00
0958.00	Water and Wastewater Technology	577	Cuyamaca		•		•		29.00-37.00	29.00-71.00
			Palomar		•		•		27.00-30.00	27.00-30.00
0999.00	Other Engineering and Related Industrial Technologies	29	San Diego City		•		•		29	29
1005.00	Commercial Music	447	MiraCosta	•			•		22.00-31.00	29.00-31.00
			San Diego City		•		•		22	25
			San Diego Miramar		•		•		24	24.01
			Southwestern		•		•		21.00-25.00	28.50-36.50
1006.00	Technical Theater	271	Grossmont	•			•		37	37
			MiraCosta	•			•		24	24
			Palomar				•		33.00-35.50	
			San Diego City				•		16.00-18.00	
			Southwestern				•		18	
1007.00	Dramatic Arts	3,166	Grossmont	•		•	•		31.00-42.50	18.00-42.50

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
			MiraCosta	•		•				18.00-21.00
			Palomar	•						31.00-32.00
			San Diego City	•		•				18.00-27.50
			San Diego Mesa	•		•	•		19.00-21.00	18.00-39.00
			Southwestern	•		•				18.00-22.50
1009.00	Applied Design	161	Palomar	•						39
1030.00	Graphic Art and Design	1,615	Cuyamaca	•	•		•		34.00-37.00	34.00-42.00
			Palomar		•		•		30	30.00-37.00
			San Diego Cont. Ed.							
			San Diego City	•			•		12.00-33.00	33
			Southwestern	•						27
1205.10	Phlebotomy	51	N/A							
1208.00	Medical Assisting	1,179	San Diego Mesa		•		•		29.00-30.00	29.00-30.00
			Southwestern		•					39
1208.20	Administrative Medical Assisting	347	MiraCosta	•			•		24	29.5
			San Diego Cont. Ed.					•		
			Southwestern				•		33	0
1209.00	Hospital Central Service Technician	23	N/A							
1210.00	Respiratory Care/Therapy	43	Grossmont		•		•		17.50-63.00	63
1214.00	Orthopedic Assistant	38	Grossmont		•		•		24	24
1217.00	Surgical Technician	68	MiraCosta	•			•		39	39
			Southwestern		•		•		13.00-38.00	38
1218.00	Occupational Therapy Technology	52	Grossmont		•					63
1222.00	Physical Therapist Assistant	69	San Diego Mesa		•					46
1223.00	Health Information Technology	334	San Diego Mesa		•					30.5
1225.00	Radiologic Technology	91	San Diego Mesa		•		•		75	75
1230.00	Nursing	197	N/A							
1230.20	Licensed Vocational Nursing	712	MiraCosta	•			•		72	72
			Southwestern		•		•		42.5	42.5

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
1240.20	Dental Hygienist	89	Southwestern		•					53
1299.00	Other Health Occupations	69	Palomar					•		
			San Diego Mesa				•		18.50-19.00	
1303.20	Fashion Merchandising	106	Palomar		•		•		29.00-33.00	29.00-33.00
			San Diego Cont. Ed.							
			San Diego Mesa		•		•		30.00-38.50	39.50-44.50
1307.00	Hospitality	659	Grossmont		•		•		37	37
			MiraCosta	•			•		27	30.5
			San Diego Mesa		•		•		35	36
			Southwestern	•	•		•		12.00-24.00	21.00-35.00
1307.10	Restaurant and Food Services and Management	34	Grossmont		•		•		30.5	30.5
			MiraCosta	•			•		25	29.5
1307.20	Lodging Management	50	Southwestern				•		22.50-26.00	
1401.00	Law, General	137	MiraCosta			•				32.00-35.00
			Palomar			•				35.00-36.00
			San Diego City			•				30
			Southwestern			•	•		22.00-24.00	31.00-34.00
1402.00	Paralegal	675	Cuyamaca		•					27
			Southwestern		•		•		32.50-40.50	32.50-35.50
2105.00	Administration of Justice	6,882	Grossmont		•	•	•		28.00-30.00	18.00-30.00
			MiraCosta	•		•	•		27	18.00-27.00
			Palomar		•	•				18.00-36.00
			San Diego Miramar		•	•	•		33	18.00-33.00
			Southwestern	•	•	•	•		28	18.00-32.00
2105.10	Corrections	1,183	Grossmont		•		•		26.00-27.00	26.00-27.00
			San Diego Miramar		•		•		29.5	29.5
			Southwestern		•					30
2105.20	Probation and Parole	67	N/A							
2105.30	Industrial and Transportation Security	83	Grossmont		•		•		24	24

TOP Code	Program Name	Enrollment	College	Associate of Arts (A.A)	Associate of Science (A.S.)	Associate Degree for Transfer	Certificate of Achievement	Noncredit Program	Certificate Units	Major Units
			Palomar		•					36
2105.40	Forensics, Evidence, and Investigation	363	Grossmont		•		•		45	45
			Palomar		•					36
			San Diego Miramar		•		•		33	33
2105.50	Police Academy	1,172	Palomar				•		43.5	
			Southwestern				•		25	
2133.00	Fire Technology	3,327	Palomar		•		•		33.00-36.00	33.00-36.00
			San Diego Miramar		•		•		21.50-24.00	21.50-24.00
			Southwestern		•		•		35	35
2133.10	Wildland Fire Technology	104	N/A							
2133.50	Fire Academy	227	Palomar				•		30.5	
			Southwestern		•		•		29	18
2199.00	Other Public and Protective Services	34	San Diego City				•		19	
2206.00	Geography	5,507	Grossmont		•	•				19.00-22.00
			Palomar			•				18.00-21.00
			San Diego City		•	•				19.00-23.00
			San Diego Mesa	•		•				19.00-21.00
			Southwestern	•		•				19.00-23.00
2206.10	Geographic Information Systems	224	Palomar		•		•	•	14.00-23.00	19.00-23.00
			San Diego Mesa		•		•		17.00-19.00	33.00-37.00
			Southwestern				•		18	

Exhibit 3. San Diego Residents, Labor Force Participants, and Community College Enrollments, 2016[29]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

	RESIDENTS		LABOR FORCE		COMMUNITY COLLEGE ENROLLMENT	
	Number of Residents	% Residents	Number in Labor Force	% Labor Force	Number Enrolled	% Enrolled
TOTAL	2,195,950	100%	1,628,639	100%	208,241	100%
GENDER	Residents		Labor Force		Enrollment	
Male	1,122,860	51%	903,346	55%	95,359	46%
Female	1,073,090	49%	725,293	45%	111,930	54%
RACE/ETHNICITY	Residents		Labor Force		Enrollment	
White	1,027,919	47%	780,394	48%	67,964	33%
Hispanic/Latino	667,106	30%	484,340	30%	84,988	41%
Asian[30]	260,598	12%	191,404	12%	23,885	11%
Black/African American	109,975	5%	79,308	5%	12,302	6%
Two or more races	107,295	5%	77,459	5%	9,752	5%
Native Hawaiian/Pacific Islander	9,913	0.5%	7,298	0.4%	1,022	0.5%
American Indian/Alaska Native	9,239	0.4%	5,786	0.4%	801	0.4%
Other	3,905	0.2%	2,650	0.2%	-	-
AGE	Residents		Labor Force		Enrollment	
16 to 19	175,759	8%	56,729	3%	35,106	17%
20 to 24	271,188	12%	206,125	13%	68,542	33%
25 to 29	275,412	13%	227,146	14%	32,583	16%
30 to 34	247,157	11%	204,197	13%	18,980	9%
35 to 39	216,700	10%	178,118	11%	12,618	6%
40 to 49	422,434	19%	341,021	21%	16,637	8%
50 to 64	587,300	27%	415,303	26%	23,775	11%

*May not equal 100 percent due to rounding or incomplete data

[29] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.
[30] Consistent with the U.S. Census, 'Asian' included 'Filipino,' data.census.gov/cedsci/table

Exhibit 4. Priority Jobs by Gender Percentage in Occupation in San Diego County[31]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

SOC Occupational Title	% Female	% Male
Bus and Truck Mechanics and Diesel Engine Specialists	1%	99%
Cement Masons and Concrete Finishers	2%	98%
Electrical Power-Line Installers and Repairers	2%	98%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2%	98%
Mobile Heavy Equipment Mechanics, Except Engines	2%	98%
Plumbers, Pipefitters, and Steamfitters	2%	98%
Security and Fire Alarm Systems Installers	2%	98%
Carpenters	3%	97%
Electricians	3%	97%
Glaziers	3%	97%
Industrial Machinery Mechanics	3%	97%
Operating Engineers and Other Construction Equipment Operators	3%	97%
Paving, Surfacing, and Tamping Equipment Operators	3%	97%
Roofers	3%	97%
Structural Iron and Steel Workers	3%	97%
Highway Maintenance Workers	4%	96%
Plasterers & Stucco Masons	4%	96%
Sheet Metal Workers	4%	96%
Solar Photovoltaic Installers	4%	96%
Aircraft Mechanics and Service Technicians	5%	95%
Floor Layers, Except Carpet, Wood, and Hard Tiles	5%	95%
Firefighters	6%	94%
Telecommunications Line Installers and Repairers	6%	94%
First-Line Supervisors of Mechanics, Installers, and Repairers	7%	93%
Water and Wastewater Treatment Plant and System Operators	7%	93%
Welders, Cutters, Solderers, and Brazers	7%	93%

SOC Occupational Title	% Female	% Male
Control and Valve Installers and Repairers, Except Mechanical Door	8%	92%
Drywall and Ceiling Tile Installers	8%	92%
Pest Control Workers	10%	90%
Surveying and Mapping Technicians	10%	90%
Telecommunications Equipment Installers and Repairers, Except Line Installers	12%	88%
Tree Trimmers & Pruners	15%	85%
Chemical Equipment Operators and Tenders	17%	83%
Electrical and Electronic Engineering Technologists and Technicians	17%	83%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	18%	82%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	19%	81%
Civil Engineering Technologists and Technicians	20%	80%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	20%	80%
Industrial Engineering Technologists and Technicians	20%	80%
Police and Sheriffs Patrol Officers	20%	80%
Architectural and Civil Drafters	22%	78%
First-Line Supervisors of Production and Operating Workers	22%	78%
First-Line Supervisors, Protective Service Workers	23%	77%
Computer Network Support Specialists	27%	73%
Computer User Support Specialists	27%	73%
Detectives and Criminal Investigators	27%	73%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	30%	70%
Transportation Security Screeners	33%	67%

[31] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

SOC Occupational Title	% Female	% Male
Web Developers and Digital Interface Designers	33%	67%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	34%	66%
Correctional Officers and Jailers	34%	66%
First-Line Supervisors of Housekeeping and Janitorial Workers	35%	65%
First-Line Supervisors of Non-Retail Sales Workers	35%	65%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	36%	64%
Food Service Managers	39%	61%
Postal Service Mail Carriers	41%	59%
Actors	45%	55%
Environmental Science and Protection Technicians, Including Health	47%	53%
Life, Physical, and Social Science Technicians, All Other	48%	52%
Insurance Sales Agents	50%	50%
Production, Planning, and Expediting Clerks	56%	44%
Property, Real Estate, and Community Association Managers	57%	43%
Real Estate Brokers	58%	42%
Real Estate Sales Agents	58%	42%
Respiratory Therapists	58%	42%
Claims Adjusters, Examiners, and Investigators	59%	41%
Procurement Clerks	59%	41%
Tax Preparers	61%	39%
Radiologic Technologists and Technicians	63%	37%

SOC Occupational Title	% Female	% Male
Psychiatric Technicians	65%	35%
First-Line Supervisors of Office and Administrative Support Workers	66%	34%
Surgical Technologists	68%	32%
Medical Equipment Preparers	69%	31%
Physical Therapist Assistants	69%	31%
Healthcare Support Workers, All Other	71%	29%
Public Safety Telecommunicators	71%	29%
Veterinary Technologists and Technicians	75%	25%
Phlebotomists	80%	20%
Brokerage Clerks	82%	18%
Eligibility Interviewers, Government Programs	82%	18%
Human Resources Assistants, Except Payroll and Timekeeping	83%	17%
Occupational Therapy Assistants	83%	17%
Flight Attendants	84%	16%
Paralegals and Legal Assistants	85%	15%
Licensed Practical and Licensed Vocational Nurses	87%	13%
Bookkeeping, Accounting, and Auditing Clerks	88%	12%
Court, Municipal, and License Clerks	88%	12%
Payroll & Timekeeping Clerks	89%	11%
Dental Hygienists	93%	7%
Executive Secretaries and Executive Administrative Assistants	96%	4%
Legal Secretaries and Administrative Assistants	96%	4%

Exhibit 5. Priority Jobs Represented by Hispanic/Latino in Occupation, 2020[32]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	Hispanic/ Latino %
Web Developers and Digital Interface Designers	17%
Flight Attendants	18%
Actors	19%
Computer User Support Specialists	20%
Life, Physical, and Social Science Technicians, All Other	20%
Computer Network Support Specialists	21%
Dental Hygienists	21%
Occupational Therapy Assistants	21%
Electrical and Electronic Engineering Technologists and Technicians	23%
Environmental Science and Protection Technicians, Including Health	23%
Industrial Engineering Technologists and Technicians	23%
Surveying and Mapping Technicians	23%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	24%
Real Estate Brokers	24%
Real Estate Sales Agents	24%
Chemical Equipment Operators and Tenders	25%
Claims Adjusters, Examiners, and Investigators	25%
Procurement Clerks	25%
Respiratory Therapists	25%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	25%
Architectural and Civil Drafters	26%
Physical Therapist Assistants	26%
Bookkeeping, Accounting, and Auditing Clerks	27%
Brokerage Clerks	27%
First-Line Supervisors of Non-Retail Sales Workers	27%
Insurance Sales Agents	27%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	27%

Occupational Title	Hispanic/ Latino %
Civil Engineering Technologists and Technicians	28%
Executive Secretaries and Executive Administrative Assistants	28%
Licensed Practical and Licensed Vocational Nurses	28%
Production, Planning, and Expediting Clerks	28%
Radiologic Technologists and Technicians	28%
Property, Real Estate, and Community Association Managers	29%
Water and Wastewater Treatment Plant and System Operators	29%
Firefighters	30%
Legal Secretaries and Administrative Assistants	30%
Veterinary Technologists and Technicians	30%
Aircraft Mechanics and Service Technicians	31%
Paralegals and Legal Assistants	31%
Payroll & Timekeeping Clerks	31%
Postal Service Mail Carriers	31%
Control and Valve Installers and Repairers, Except Mechanical Door	32%
First-Line Supervisors of Mechanics, Installers, and Repairers	32%
First-Line Supervisors of Office and Administrative Support Workers	32%
Food Service Managers	32%
Electrical Power-Line Installers and Repairers	33%
First-Line Supervisors, Protective Service Workers	34%
Public Safety Telecommunicators	34%
Surgical Technologists	34%
Telecommunications Equipment Installers and Repairers, Except Line Installers	34%
Detectives and Criminal Investigators	35%
Human Resources Assistants, Except Payroll and Timekeeping	35%
Psychiatric Technicians	35%
Tax Preparers	35%
Court, Municipal, and License Clerks	36%
Healthcare Support Workers, All Other	36%

[32] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

Occupational Title	Hispanic/ Latino %
Highway Maintenance Workers	36%
Industrial Machinery Mechanics	36%
Medical Equipment Preparers	36%
Mobile Heavy Equipment Mechanics, Except Engines	36%
First-Line Supervisors of Production and Operating Workers	37%
Sheet Metal Workers	37%
Correctional Officers and Jailers	38%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	38%
Phlebotomists	38%
Police and Sheriffs Patrol Officers	38%
Electricians	39%
Transportation Security Screeners	39%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	40%
Operating Engineers and Other Construction Equipment Operators	40%
Paving, Surfacing, and Tamping Equipment Operators	40%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	41%
Telecommunications Line Installers and Repairers	41%

Occupational Title	Hispanic/ Latino %
Bus and Truck Mechanics and Diesel Engine Specialists	43%
Security and Fire Alarm Systems Installers	43%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	45%
Plumbers, Pipefitters, and Steamfitters	45%
Eligibility Interviewers, Government Programs	46%
Structural Iron and Steel Workers	47%
First-Line Supervisors of Housekeeping and Janitorial Workers	52%
Welders, Cutters, Solderers, and Brazers	52%
Glaziers	53%
Solar Photovoltaic Installers	53%
Carpenters	57%
Pest Control Workers	62%
Tree Trimmers & Pruners	68%
Cement Masons and Concrete Finishers	70%
Roofers	71%
Drywall and Ceiling Tile Installers	72%
Floor Layers, Except Carpet, Wood, and Hard Tiles	73%
Plasterers & Stucco Masons	77%

Exhibit 6. Priority Jobs Represented by Asian in Occupation, 2020[33]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	Asian %
Cement Masons and Concrete Finishers	0.3%
Operating Engineers and Other Construction Equipment Operators	1%
Paving, Surfacing, and Tamping Equipment Operators	1%
Plasterers & Stucco Masons	1%
Roofers	1%
Drywall and Ceiling Tile Installers	2%
Electrical Power-Line Installers and Repairers	2%
Floor Layers, Except Carpet, Wood, and Hard Tiles	2%
Glaziers	2%
Highway Maintenance Workers	2%
Structural Iron and Steel Workers	2%
Carpenters	3%
Control and Valve Installers and Repairers, Except Mechanical Door	3%
Mobile Heavy Equipment Mechanics, Except Engines	3%
Plumbers, Pipefitters, and Steamfitters	3%
Solar Photovoltaic Installers	3%
Correctional Officers and Jailers	4%
Electricians	4%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	4%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4%
Pest Control Workers	4%
Surveying and Mapping Technicians	4%
Tree Trimmers & Pruners	4%
Bus and Truck Mechanics and Diesel Engine Specialists	5%
Firefighters	5%
First-Line Supervisors of Housekeeping and Janitorial Workers	5%
First-Line Supervisors of Mechanics, Installers, and Repairers	5%
First-Line Supervisors, Protective Service Workers	5%
Public Safety Telecommunicators	5%
Security and Fire Alarm Systems Installers	5%
Sheet Metal Workers	5%
Telecommunications Line Installers and Repairers	5%
Water and Wastewater Treatment Plant and System Operators	5%
Actors	7%
Detectives and Criminal Investigators	7%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	7%
Legal Secretaries and Administrative Assistants	7%
Property, Real Estate, and Community Association Managers	7%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	7%
Welders, Cutters, Solderers, and Brazers	7%
Executive Secretaries and Executive Administrative Assistants	8%
Industrial Machinery Mechanics	8%
Paralegals and Legal Assistants	8%
Police and Sheriffs Patrol Officers	8%
Real Estate Brokers	8%
Real Estate Sales Agents	8%
Telecommunications Equipment Installers and Repairers, Except Line Installers	8%
Veterinary Technologists and Technicians	8%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	9%
Brokerage Clerks	10%
Court, Municipal, and License Clerks	10%
First-Line Supervisors of Office and Administrative Support Workers	10%
First-Line Supervisors of Production and Operating Workers	10%
Insurance Sales Agents	10%
Payroll & Timekeeping Clerks	10%
Aircraft Mechanics and Service Technicians	11%
Bookkeeping, Accounting, and Auditing Clerks	11%
Tax Preparers	11%
Architectural and Civil Drafters	12%
Chemical Equipment Operators and Tenders	12%

[33] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

Occupational Title	Asian %
Claims Adjusters, Examiners, and Investigators	12%
First-Line Supervisors of Non-Retail Sales Workers	12%
Human Resources Assistants, Except Payroll and Timekeeping	12%
Production, Planning, and Expediting Clerks	12%
Dental Hygienists	13%
Occupational Therapy Assistants	13%
Civil Engineering Technologists and Technicians	14%
Flight Attendants	14%
Procurement Clerks	14%
Transportation Security Screeners	14%
Eligibility Interviewers, Government Programs	16%
Healthcare Support Workers, All Other	16%
Medical Equipment Preparers	17%
Phlebotomists	17%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	18%
Food Service Managers	18%
Physical Therapist Assistants	18%

Occupational Title	Asian %
Radiologic Technologists and Technicians	19%
Computer Network Support Specialists	20%
Computer User Support Specialists	20%
Environmental Science and Protection Technicians, Including Health	20%
Licensed Practical and Licensed Vocational Nurses	20%
Surgical Technologists	20%
Web Developers and Digital Interface Designers	20%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	21%
Electrical and Electronic Engineering Technologists and Technicians	22%
Psychiatric Technicians	22%
Industrial Engineering Technologists and Technicians	24%
Respiratory Therapists	27%
Life, Physical, and Social Science Technicians, All Other	28%
Postal Service Mail Carriers	30%

Exhibit 7. Priority Jobs Represented by Black/African American in Occupation, 2020[34]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	Black/African American %
Carpenters	2%
Dental Hygienists	2%
Drywall and Ceiling Tile Installers	2%
Floor Layers, Except Carpet, Wood, and Hard Tiles	2%
Glaziers	2%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2%
Architectural and Civil Drafters	3%
Electricians	3%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	3%
First-Line Supervisors of Non-Retail Sales Workers	3%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	3%
Industrial Machinery Mechanics	3%
Mobile Heavy Equipment Mechanics, Except Engines	3%
Plasterers & Stucco Masons	3%
Real Estate Brokers	3%
Real Estate Sales Agents	3%
Roofers	3%
Structural Iron and Steel Workers	3%
Surveying and Mapping Technicians	3%
Web Developers and Digital Interface Designers	3%
Bookkeeping, Accounting, and Auditing Clerks	4%
Bus and Truck Mechanics and Diesel Engine Specialists	4%
Cement Masons and Concrete Finishers	4%
Electrical and Electronic Engineering Technologists and Technicians	4%
First-Line Supervisors of Mechanics, Installers, and Repairers	4%
First-Line Supervisors of Production and Operating Workers	4%
Food Service Managers	4%
Industrial Engineering Technologists and Technicians	4%
Insurance Sales Agents	4%

Occupational Title	Black/African American %
Legal Secretaries and Administrative Assistants	4%
Life, Physical, and Social Science Technicians, All Other	4%
Operating Engineers and Other Construction Equipment Operators	4%
Paralegals and Legal Assistants	4%
Paving, Surfacing, and Tamping Equipment Operators	4%
Pest Control Workers	4%
Physical Therapist Assistants	4%
Plumbers, Pipefitters, and Steamfitters	4%
Property, Real Estate, and Community Association Managers	4%
Radiologic Technologists and Technicians	4%
Sheet Metal Workers	4%
Solar Photovoltaic Installers	4%
Tree Trimmers & Pruners	4%
Welders, Cutters, Solderers, and Brazers	4%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	5%
Electrical Power-Line Installers and Repairers	5%
Environmental Science and Protection Technicians, Including Health	5%
Executive Secretaries and Executive Administrative Assistants	5%
Production, Planning, and Expediting Clerks	5%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	5%
Veterinary Technologists and Technicians	5%
Actors	6%
Aircraft Mechanics and Service Technicians	6%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	6%
Chemical Equipment Operators and Tenders	6%
Civil Engineering Technologists and Technicians	6%
Computer Network Support Specialists	6%
Computer User Support Specialists	6%
First-Line Supervisors of Housekeeping and Janitorial Workers	6%

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Occupational Title	Black/African American %
First-Line Supervisors of Office and Administrative Support Workers	6%
Payroll & Timekeeping Clerks	6%
Respiratory Therapists	6%
Tax Preparers	6%
Brokerage Clerks	7%
Firefighters	7%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	7%
Occupational Therapy Assistants	7%
Procurement Clerks	7%
Water and Wastewater Treatment Plant and System Operators	7%
Control and Valve Installers and Repairers, Except Mechanical Door	8%
Detectives and Criminal Investigators	8%
Highway Maintenance Workers	8%
Surgical Technologists	8%
Telecommunications Equipment Installers and Repairers, Except Line Installers	8%
Telecommunications Line Installers and Repairers	8%

Occupational Title	Black/African American %
Human Resources Assistants, Except Payroll and Timekeeping	9%
Psychiatric Technicians	9%
Claims Adjusters, Examiners, and Investigators	10%
Medical Equipment Preparers	10%
Phlebotomists	10%
Police and Sheriffs Patrol Officers	10%
Security and Fire Alarm Systems Installers	10%
Court, Municipal, and License Clerks	11%
Eligibility Interviewers, Government Programs	11%
Public Safety Telecommunicators	11%
Healthcare Support Workers, All Other	12%
Licensed Practical and Licensed Vocational Nurses	12%
Flight Attendants	13%
Postal Service Mail Carriers	13%
First-Line Supervisors, Protective Service Workers	14%
Transportation Security Screeners	14%
Correctional Officers and Jailers	19%

Exhibit 8. Priority Jobs Represented by American Indian/Alaska Native in Occupation, 2020[35]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	American Indian/ Alaska Native %
Postal Service Mail Carriers	0%
Plasterers & Stucco Masons	0.1%
Real Estate Brokers	0.1%
Actors	0.2%
Chemical Equipment Operators and Tenders	0.2%
Dental Hygienists	0.2%
First-Line Supervisors of Non-Retail Sales Workers	0.2%
Flight Attendants	0.2%
Floor Layers, Except Carpet, Wood, and Hard Tiles	0.2%
Food Service Managers	0.2%
Insurance Sales Agents	0.2%
Occupational Therapy Assistants	0.2%
Physical Therapist Assistants	0.2%
Radiologic Technologists and Technicians	0.2%
Real Estate Sales Agents	0.2%
Respiratory Therapists	0.2%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	0.2%
Web Developers and Digital Interface Designers	0.2%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	0.3%
Bus and Truck Mechanics and Diesel Engine Specialists	0.3%
Computer Network Support Specialists	0.3%
Computer User Support Specialists	0.3%
Electrical and Electronic Engineering Technologists and Technicians	0.3%
Executive Secretaries and Executive Administrative Assistants	0.3%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	0.3%
First-Line Supervisors of Office and Administrative Support Workers	0.3%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	0.3%
Glaziers	0.3%

Occupational Title	American Indian/ Alaska Native %
Industrial Engineering Technologists and Technicians	0.3%
Legal Secretaries and Administrative Assistants	0.3%
Paralegals and Legal Assistants	0.3%
Phlebotomists	0.3%
Production, Planning, and Expediting Clerks	0.3%
Property, Real Estate, and Community Association Managers	0.3%
Psychiatric Technicians	0.3%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	0.3%
Security and Fire Alarm Systems Installers	0.3%
Surgical Technologists	0.3%
Tax Preparers	0.3%
Telecommunications Equipment Installers and Repairers, Except Line Installers	0.3%
Telecommunications Line Installers and Repairers	0.3%
Tree Trimmers & Pruners	0.3%
Veterinary Technologists and Technicians	0.3%
Architectural and Civil Drafters	0.4%
Bookkeeping, Accounting, and Auditing Clerks	0.4%
Brokerage Clerks	0.4%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	0.4%
Carpenters	0.4%
Claims Adjusters, Examiners, and Investigators	0.4%
Control and Valve Installers and Repairers, Except Mechanical Door	0.4%
First-Line Supervisors of Housekeeping and Janitorial Workers	0.4%
First-Line Supervisors of Mechanics, Installers, and Repairers	0.4%
First-Line Supervisors of Production and Operating Workers	0.4%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.4%
Industrial Machinery Mechanics	0.4%
Medical Equipment Preparers	0.4%

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Occupational Title	American Indian/ Alaska Native %
Pest Control Workers	0.4%
Police and Sheriffs Patrol Officers	0.4%
Public Safety Telecommunicators	0.4%
Roofers	0.4%
Sheet Metal Workers	0.4%
Solar Photovoltaic Installers	0.4%
Aircraft Mechanics and Service Technicians	0.5%
Cement Masons and Concrete Finishers	0.5%
Civil Engineering Technologists and Technicians	0.5%
Drywall and Ceiling Tile Installers	0.5%
Electrical Power-Line Installers and Repairers	0.5%
Electricians	0.5%
Licensed Practical and Licensed Vocational Nurses	0.5%
Life, Physical, and Social Science Technicians, All Other	0.5%
First-Line Supervisors, Protective Service Workers	0.5%
Mobile Heavy Equipment Mechanics, Except Engines	0.5%
Payroll & Timekeeping Clerks	0.5%
Plumbers, Pipefitters, and Steamfitters	0.5%

Occupational Title	American Indian/ Alaska Native %
Correctional Officers and Jailers	0.6%
Court, Municipal, and License Clerks	0.6%
Firefighters	0.6%
Procurement Clerks	0.6%
Welders, Cutters, Solderers, and Brazers	0.6%
Detectives and Criminal Investigators	0.7%
Environmental Science and Protection Technicians, Including Health	0.7%
Highway Maintenance Workers	0.7%
Human Resources Assistants, Except Payroll and Timekeeping	0.7%
Healthcare Support Workers, All Other	0.8%
Paving, Surfacing, and Tamping Equipment Operators	0.8%
Transportation Security Screeners	0.8%
Water and Wastewater Treatment Plant and System Operators	0.8%
Operating Engineers and Other Construction Equipment Operators	0.9%
Eligibility Interviewers, Government Programs	1%
Structural Iron and Steel Workers	1%
Surveying and Mapping Technicians	1%

Exhibit 9. Priority Jobs Represented by Native Hawaiian/Pacific Islander in Occupation, 2020[36]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	Native Hawaiian/ Pacific Islander %
Occupational Therapy Assistants	0.1%
Actors	0.2%
Control and Valve Installers and Repairers, Except Mechanical Door	0.2%
Court, Municipal, and License Clerks	0.2%
Dental Hygienists	0.2%
Floor Layers, Except Carpet, Wood, and Hard Tiles	0.2%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.2%
Procurement Clerks	0.2%
Real Estate Brokers	0.2%
Real Estate Sales Agents	0.2%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	0.2%
Tax Preparers	0.2%
Web Developers and Digital Interface Designers	0.2%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	0.3%
Brokerage Clerks	0.3%
Drywall and Ceiling Tile Installers	0.3%
First-Line Supervisors of Non-Retail Sales Workers	0.3%
Highway Maintenance Workers	0.3%
Physical Therapist Assistants	0.3%
Plasterers & Stucco Masons	0.3%
Police and Sheriffs Patrol Officers	0.3%
Property, Real Estate, and Community Association Managers	0.3%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	0.3%
Welders, Cutters, Solderers, and Brazers	0.3%
Carpenters	0.4%
Cement Masons and Concrete Finishers	0.4%
Computer Network Support Specialists	0.4%
Computer User Support Specialists	0.4%

Occupational Title	Native Hawaiian/ Pacific Islander %
Detectives and Criminal Investigators	0.4%
Electrical Power-Line Installers and Repairers	0.4%
Executive Secretaries and Executive Administrative Assistants	0.4%
Firefighters	0.4%
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	0.4%
First-Line Supervisors of Mechanics, Installers, and Repairers	0.4%
First-Line Supervisors of Office and Administrative Support Workers	0.4%
First-Line Supervisors of Production and Operating Workers	0.4%
Food Service Managers	0.4%
Insurance Sales Agents	0.4%
Mobile Heavy Equipment Mechanics, Except Engines	0.4%
Paralegals and Legal Assistants	0.4%
Payroll & Timekeeping Clerks	0.4%
Phlebotomists	0.4%
Plumbers, Pipefitters, and Steamfitters	0.4%
Public Safety Telecommunicators	0.4%
Respiratory Therapists	0.4%
Roofers	0.4%
Security and Fire Alarm Systems Installers	0.4%
Sheet Metal Workers	0.4%
Tree Trimmers & Pruners	0.4%
Veterinary Technologists and Technicians	0.4%
Water and Wastewater Treatment Plant and System Operators	0.4%
Architectural and Civil Drafters	0.5%
Bookkeeping, Accounting, and Auditing Clerks	0.5%
Bus and Truck Mechanics and Diesel Engine Specialists	0.5%
Claims Adjusters, Examiners, and Investigators	0.5%
Electrical and Electronic Engineering Technologists and Technicians	0.5%
Electricians	0.5%

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Occupational Title	Native Hawaiian/ Pacific Islander %
Eligibility Interviewers, Government Programs	0.5%
Environmental Science and Protection Technicians, Including Health	0.5%
First-Line Supervisors of Housekeeping and Janitorial Workers	0.5%
Glaziers	0.5%
Industrial Engineering Technologists and Technicians	0.5%
Life, Physical, and Social Science Technicians, All Other	0.5%
Operating Engineers and Other Construction Equipment Operators	0.5%
Paving, Surfacing, and Tamping Equipment Operators	0.5%
Pest Control Workers	0.5%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	0.6%
Chemical Equipment Operators and Tenders	0.6%
Civil Engineering Technologists and Technicians	0.6%
Correctional Officers and Jailers	0.6%
Human Resources Assistants, Except Payroll and Timekeeping	0.6%
Industrial Machinery Mechanics	0.6%
Licensed Practical and Licensed Vocational Nurses	0.6%

Occupational Title	Native Hawaiian/ Pacific Islander %
First-Line Supervisors, Protective Service Workers	0.6%
Production, Planning, and Expediting Clerks	0.6%
Radiologic Technologists and Technicians	0.6%
Surgical Technologists	0.6%
Surveying and Mapping Technicians	0.6%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	0.7%
Medical Equipment Preparers	0.7%
Structural Iron and Steel Workers	0.7%
Healthcare Support Workers, All Other	0.8%
Telecommunications Line Installers and Repairers	0.8%
Postal Service Mail Carriers	0.9%
Telecommunications Equipment Installers and Repairers, Except Line Installers	0.9%
Aircraft Mechanics and Service Technicians	1%
Legal Secretaries and Administrative Assistants	1%
Solar Photovoltaic Installers	1%
Flight Attendants	2%
Transportation Security Screeners	3%
Psychiatric Technicians	4%

Exhibit 10. Priority Jobs by Age (55 and Over), 2020[37]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	Age Group %						
	14-18	19-21	22-24	25-34	35-44	45-54	55-64
Postal Service Mail Carriers	0.2%	0.7%	2%	17%	16%	24%	33%
Court, Municipal, and License Clerks	0.1%	0.6%	2%	15%	22%	26%	27%
Water and Wastewater Treatment Plant and System Operators	0%	0.7%	2%	17%	22%	27%	27%
Electrical and Electronic Engineering Technologists and Technicians	0.2%	2%	4%	18%	21%	24%	25%
First-Line Supervisors of Mechanics, Installers, and Repairers	0%	0.4%	1%	14%	24%	29%	25%
Highway Maintenance Workers	0.3%	2%	3%	15%	22%	29%	25%
Industrial Machinery Mechanics	0.1%	0.8%	2%	17%	22%	27%	25%
Bookkeeping, Accounting, and Auditing Clerks	0.2%	1%	3%	16%	21%	23%	24%
Control and Valve Installers and Repairers, Except Mechanical Door	0%	0.7%	2%	19%	28%	24%	24%
Executive Secretaries and Executive Administrative Assistants	0.3%	2%	3%	17%	21%	24%	24%
Industrial Engineering Technologists and Technicians	0.1%	1%	4%	19%	22%	25%	24%
Legal Secretaries and Administrative Assistants	0.3%	2%	4%	18%	21%	22%	24%
Eligibility Interviewers, Government Programs	0%	0.3%	2%	21%	25%	24%	23%
First-Line Supervisors of Housekeeping and Janitorial Workers	0.1%	0.6%	2%	15%	24%	29%	23%
First-Line Supervisors of Production and Operating Workers	0%	0.4%	2%	17%	25%	28%	23%
Flight Attendants	0%	0.3%	3%	23%	19%	26%	23%
First-Line Supervisors, Protective Service Workers	0%	0.8%	2%	19%	24%	24%	23%
Paving, Surfacing, and Tamping Equipment Operators	0.1%	1%	3%	18%	23%	27%	23%
Procurement Clerks	0.1%	0.6%	3%	19%	22%	27%	23%
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	0.1%	1%	5%	24%	22%	21%	22%
Civil Engineering Technologists and Technicians	0.4%	3%	5%	20%	23%	23%	22%
Mobile Heavy Equipment Mechanics, Except Engines	0.2%	2%	4%	20%	23%	25%	22%
Operating Engineers and Other Construction Equipment Operators	0.1%	1%	3%	19%	23%	26%	22%
Property, Real Estate, and Community Association Managers	0%	0.4%	2%	18%	23%	23%	22%
Real Estate Brokers	0%	0.4%	2%	16%	22%	22%	22%
Real Estate Sales Agents	0%	0.4%	2%	16%	22%	22%	22%
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other	0.3%	2%	5%	20%	22%	24%	21%
Payroll & Timekeeping Clerks	0.1%	0.9%	3%	20%	24%	24%	21%
Bus and Truck Mechanics and Diesel Engine Specialists	0.3%	2%	5%	23%	22%	24%	20%

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Occupational Title	Age Group %						
	14-18	19-21	22-24	25-34	35-44	45-54	55-64
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	0.1%	0.9%	2%	18%	24%	29%	20%
First-Line Supervisors of Office and Administrative Support Workers	0.1%	0.7%	2%	20%	26%	25%	20%
Production, Planning, and Expediting Clerks	0.2%	1%	4%	24%	23%	23%	20%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	0.1%	0.7%	3%	21%	24%	24%	20%
Tax Preparers	0.2%	2%	5%	19%	17%	15%	20%
Aircraft Mechanics and Service Technicians	0.1%	2%	6%	26%	22%	21%	19%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	0%	0.8%	3%	22%	25%	26%	19%
Licensed Practical and Licensed Vocational Nurses	0.1%	2%	4%	24%	24%	22%	19%
Respiratory Therapists	0%	0.1%	2%	23%	28%	24%	19%
Chemical Equipment Operators and Tenders	0%	0.9%	4%	25%	26%	23%	18%
Claims Adjusters, Examiners, and Investigators	0.1%	0.5%	3%	26%	27%	22%	18%
First-Line Supervisors of Non-Retail Sales Workers	0%	0.5%	3%	20%	28%	25%	18%
Insurance Sales Agents	0.1%	0.7%	3%	22%	26%	22%	18%
Pest Control Workers	0.6%	3%	6%	22%	21%	23%	18%
Surveying and Mapping Technicians	0.4%	3%	6%	25%	23%	19%	18%
Transportation Security Screeners	0.1%	2%	7%	31%	17%	17%	18%
Architectural and Civil Drafters	0.3%	2%	6%	26%	23%	20%	17%
Brokerage Clerks	0.2%	2%	5%	22%	24%	22%	17%
Human Resources Assistants, Except Payroll and Timekeeping	0.3%	3%	6%	26%	23%	19%	17%
Tree Trimmers & Pruners	1%	4%	6%	23%	21%	21%	17%
Welders, Cutters, Solderers, and Brazers	0.2%	3%	5%	26%	24%	21%	17%
Healthcare Support Workers, All Other	0.7%	5%	8%	27%	21%	19%	16%
Medical Equipment Preparers	1%	3%	5%	27%	23%	20%	16%
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	0.3%	2%	6%	27%	24%	20%	16%
Sheet Metal Workers	0.3%	2%	5%	26%	25%	22%	16%
Structural Iron and Steel Workers	0.3%	2%	5%	24%	27%	23%	16%
Telecommunications Equipment Installers and Repairers, Except Line Installers	0.2%	2%	4%	23%	28%	24%	16%
Carpenters	0.6%	3%	5%	25%	26%	22%	15%
Cement Masons and Concrete Finishers	0.4%	2%	5%	27%	26%	21%	15%
Dental Hygienists	0.1%	0.6%	3%	26%	28%	24%	15%
Paralegals and Legal Assistants	0.1%	1%	7%	29%	25%	19%	15%
Public Safety Telecommunicators	0.2%	2%	4%	29%	27%	20%	15%
Radiologic Technologists and Technicians	0%	0.6%	3%	28%	28%	22%	15%
Electrical Power-Line Installers and Repairers	0.1%	2%	4%	29%	28%	21%	14%

Occupational Title	Age Group %						
	14-18	19-21	22-24	25-34	35-44	45-54	55-64
Electricians	0.3%	2%	5%	28%	27%	20%	14%
Food Service Managers	0.3%	3%	5%	27%	24%	20%	14%
Glaziers	0.5%	3%	6%	26%	24%	23%	14%
Plumbers, Pipefitters, and Steamfitters	0.2%	2%	5%	28%	28%	21%	14%
Computer Network Support Specialists	0.2%	2%	5%	29%	27%	20%	13%
Computer User Support Specialists	0.2%	2%	5%	30%	27%	20%	13%
Correctional Officers and Jailers	0.1%	2%	5%	27%	28%	23%	13%
Environmental Science and Protection Technicians, Including Health	1%	8%	12%	29%	17%	15%	13%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.2%	2%	5%	28%	28%	21%	13%
Detectives and Criminal Investigators	0%	0.3%	1%	20%	37%	26%	12%
Plasterers & Stucco Masons	0.6%	3%	5%	25%	28%	23%	12%
Roofers	0.9%	4%	7%	28%	26%	20%	12%
Drywall and Ceiling Tile Installers	1%	4%	6%	27%	28%	20%	11%
Life, Physical, and Social Science Technicians, All Other	1%	11%	13%	30%	17%	14%	11%
Security and Fire Alarm Systems Installers	0.2%	4%	7%	32%	26%	16%	11%
Surgical Technologists	0%	1%	5%	34%	27%	19%	11%
Telecommunications Line Installers and Repairers	0.2%	2%	5%	29%	31%	21%	11%
Actors	6%	9%	8%	25%	22%	12%	10%
Floor Layers, Except Carpet, Wood, and Hard Tiles	0.9%	4%	7%	27%	28%	21%	10%
Occupational Therapy Assistants	0%	0.6%	7%	36%	27%	16%	10%
Phlebotomists	0%	2%	7%	34%	26%	18%	10%
Police and Sheriffs Patrol Officers	0.1%	0.9%	3%	30%	33%	21%	10%
Psychiatric Technicians	0.1%	4%	11%	37%	21%	15%	9%
Solar Photovoltaic Installers	0.4%	4%	7%	34%	28%	16%	9%
Firefighters	0.1%	1%	4%	31%	33%	22%	8%
Physical Therapist Assistants	0.3%	5%	17%	34%	19%	14%	8%
Veterinary Technologists and Technicians	0.4%	3%	10%	43%	24%	11%	7%
Web Developers and Digital Interface Designers	0.5%	2%	6%	40%	31%	14%	6%

Exhibit 11. Priority Programs (TOP Codes) Enrollment by Females, 2016-2017[38]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% Female
0952.00	Construction Crafts Technology	2%
0952.10	Carpentry	2%
0952.20	Electrical	3%
0956.50	Welding Technology	7%
2133.00	Fire Technology	7%
0950.00	Aeronautical and Aviation Technology	11%
0956.00	Manufacturing and Industrial Technology	11%
0708.00	Computer Infrastructure and Support	13%
0708.10	Computer Networking	13%
0706.00	Computer Science (Transfer)	17%
0953.00	Drafting Technology	18%
1005.00	Commercial Music	18%
2105.10	Corrections	18%
2105.50	Police Academy	18%
0708.20	Computer Support	19%
0957.00	Civil and Construction Management Technology	19%
0707.00	Computer Software Development	21%
0957.30	Surveying	22%
0303.00	Environmental Technology	23%
0707.10	Computer Programming	24%
0104.00	Viticulture, Enology, and Wine Business	31%
0934.00	Electronics and Electric Technology	31%
0709.00	World Wide Web Administration	33%
0614.00	Digital Media	34%
0201.00	Architecture and Architectural Technology	35%
0109.30	Nursery Technology	36%
2105.20	Probation and Parole	36%
2105.30	Industrial and Transportation Security	36%
0701.00	Information Technology, General	38%
0109.00	Horticulture	40%
0614.30	Website Design and Development	40%
0109.10	Landscape Design and Maintenance	42%
1299.00	Other Health Occupations	42%
2105.00	Administration of Justice	42%
2206.10	Geographic Information Systems	43%
2105.40	Forensics, Evidence, and Investigation	45%

TOP Code	Program Name	% Female
0506.30	Management Development and Supervision	48%
0509.60	Display	48%
0702.00	Computer Information Systems	49%
0502.00	Accounting	50%
0707.30	Computer Systems Analysis	50%
1030.00	Graphic Art and Design	50%
2206.00	Geography	50%
0511.00	Real Estate	51%
0709.10	E-Commerce (Technology emphasis)	52%
2199.00	Other Public and Protective Services	53%
0509.00	Marketing and Distribution	54%
1007.00	Dramatic Arts	54%
1006.00	Technical Theater	55%
0509.40	Sales and Salesmanship	56%
0301.00	Environmental Science	57%
1307.20	Lodging Management	58%
0702.10	Software Applications	59%
1009.00	Applied Design	60%
0509.70	E-Commerce (Business emphasis)	61%
1222.00	Physical Therapist Assistant	61%
0430.00	Biotechnology and Biomedical Technology	62%
0502.10	Tax Studies	64%
0512.00	Insurance	64%
1307.00	Hospitality	64%
1214.00	Orthopedic Assistant	66%
1401.00	Law, General	66%
0514.00	Office Technology/Office Computer Applications	67%
0955.00	Laboratory Science Technology	69%
1225.00	Radiologic Technology	69%
1217.00	Surgical Technician	74%
1402.00	Paralegal	74%
1210.00	Respiratory Care/Therapy	77%
1230.00	Nursing	79%
1230.20	Licensed Vocational Nursing	79%
1208.20	Administrative Medical Assisting	80%
0514.20	Medical Office Technology	81%
1208.00	Medical Assisting	81%
1218.00	Occupational Therapy Technology	81%
1223.00	Health Information Technology	82%
1303.20	Fashion Merchandising	82%

[38] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

Exhibit 12. Priority Programs (TOP Codes) Enrollment by Males, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% Male
0514.20	Medical Office Technology	18%
1223.00	Health Information Technology	18%
1303.20	Fashion Merchandising	18%
1208.20	Administrative Medical Assisting	20%
1230.00	Nursing	21%
1230.20	Licensed Vocational Nursing	21%
1210.00	Respiratory Care/Therapy	23%
1402.00	Paralegal	25%
1208.00	Medical Assisting	26%
1217.00	Surgical Technician	26%
0955.00	Laboratory Science Technology	31%
1225.00	Radiologic Technology	31%
0514.00	Office Technology/Office Computer Applications	33%
1214.00	Orthopedic Assistant	34%
1401.00	Law, General	34%
0502.10	Tax Studies	35%
0512.00	Insurance	36%
1307.00	Hospitality	36%
0430.00	Biotechnology and Biomedical Technology	38%
0509.70	E-Commerce (Business emphasis)	39%
1222.00	Physical Therapist Assistant	39%
0702.10	Software Applications	40%
1009.00	Applied Design	40%
0301.00	Environmental Science	42%
1307.20	Lodging Management	42%
0509.40	Sales and Salesmanship	44%
1006.00	Technical Theater	45%
1007.00	Dramatic Arts	45%
0509.00	Marketing and Distribution	46%
0709.10	E-Commerce (Technology emphasis)	46%
2199.00	Other Public and Protective Services	47%
0511.00	Real Estate	49%
2206.00	Geography	49%
0502.00	Accounting	50%
0707.30	Computer Systems Analysis	50%
1030.00	Graphic Art and Design	50%
0702.00	Computer Information Systems	51%
0506.30	Management Development and Supervision	52%
0509.60	Display	52%
2105.40	Forensics, Evidence, and Investigation	55%
2206.10	Geographic Information Systems	55%
0109.10	Landscape Design and Maintenance	57%

TOP Code	Program Name	% Male
0109.00	Horticulture	58%
1299.00	Other Health Occupations	58%
2105.00	Administration of Justice	58%
0614.30	Website Design and Development	60%
0109.30	Nursery Technology	61%
0701.00	Information Technology, General	61%
2105.20	Probation and Parole	63%
2105.30	Industrial and Transportation Security	64%
0201.00	Architecture and Architectural Technology	65%
0104.00	Viticulture, Enology, and Wine Business	66%
0614.00	Digital Media	66%
0709.00	World Wide Web Administration	67%
0707.10	Computer Programming	76%
0303.00	Environmental Technology	77%
0957.30	Surveying	78%
0707.00	Computer Software Development	79%
0708.20	Computer Support	81%
0953.00	Drafting Technology	81%
0957.00	Civil and Construction Management Technology	81%
1005.00	Commercial Music	81%
2105.10	Corrections	82%
2105.50	Police Academy	82%
0706.00	Computer Science (Transfer)	83%
0708.00	Computer Infrastructure and Support	86%
0708.10	Computer Networking	87%
0950.00	Aeronautical and Aviation Technology	89%
0956.00	Manufacturing and Industrial Technology	89%
0952.60	Masonry, Tile, Cement, Lath and Plaster	91%
0956.50	Welding Technology	93%
0952.10	Carpentry	94%
2133.10	Wildland Fire Technology	94%
2133.00	Fire Technology	95%
0947.00	Diesel Technology	96%
0952.80	Drywall and Insulation	96%
0952.20	Electrical	97%
0934.00	Electronics and Electric Technology	98%
0952.00	Construction Crafts Technology	99%
0934.40	Electrical Systems and Power Transmission	100%

Exhibit 13. Priority Programs (TOP Codes) Enrollment by Age, 2016-2017[39]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	Age Group %					
		19 and younger	20-24	25-29	30-34	35-39	40 and older
0952.00	Construction Crafts Technology	2%	29%	33%	18%	11%	5%
0109.00	Horticulture	3%	25%	20%	15%	6%	15%
0502.10	Tax Studies	3%	14%	24%	15%	11%	16%
0934.00	Electronics and Electric Technology	3%	19%	16%	13%	14%	19%
0952.10	Carpentry	3%	28%	30%	17%	10%	6%
0952.20	Electrical	3%	22%	33%	18%	12%	6%
0109.10	Landscape Design and Maintenance	4%	23%	17%	14%	8%	17%
0957.00	Civil and Construction Management Technology	4%	18%	20%	19%	11%	14%
0958.00	Water and Wastewater Technology	4%	13%	21%	22%	15%	14%
1402.00	Paralegal	4%	29%	21%	13%	9%	12%
0614.30	Website Design and Development	5%	25%	20%	16%	9%	14%
0707.00	Computer Software Development	5%	34%	23%	16%	7%	8%
0708.00	Computer Infrastructure and Support	5%	21%	22%	18%	9%	12%
2133.50	Fire Academy	5%	32%	39%	18%	5%	N/A
0511.00	Real Estate	6%	25%	21%	14%	10%	12%
0514.00	Office Technology/Office Computer Applications	6%	19%	14%	12%	10%	20%
0708.10	Computer Networking	6%	21%	19%	19%	12%	12%
0946.00	Environmental Control Technology	6%	14%	23%	18%	13%	17%
0514.20	Medical Office Technology	7%	35%	23%	10%	9%	8%
0950.00	Aeronautical and Aviation Technology	7%	32%	23%	17%	8%	7%
1208.00	Medical Assisting	7%	37%	23%	15%	7%	6%
1230.20	Licensed Vocational Nursing	7%	36%	27%	12%	9%	5%
0430.00	Biotechnology and Biomedical Technology	8%	46%	21%	10%	6%	4%
0702.10	Software Applications	8%	22%	16%	11%	8%	18%
1208.20	Administrative Medical Assisting	8%	41%	24%	9%	N/A	N/A
2133.00	Fire Technology	8%	22%	16%	15%	14%	13%
0509.00	Marketing and Distribution	11%	33%	18%	10%	7%	11%
0947.00	Diesel Technology	11%	34%	24%	13%	N/A	N/A
0506.30	Management Development and Supervision	12%	40%	19%	12%	N/A	N/A

[39] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

TOP Code	Program Name	Age Group %					
		19 and younger	20-24	25-29	30-34	35-39	40 and older
0702.00	Computer Information Systems	12%	22%	16%	13%	9%	17%
0953.00	Drafting Technology	13%	39%	19%	9%	6%	7%
0956.50	Welding Technology	13%	33%	18%	12%	7%	9%
2105.30	Industrial and Transportation Security	13%	37%	19%	12%	N/A	N/A
2105.40	Forensics, Evidence, and Investigation	13%	61%	15%	4%	3%	N/A
0502.00	Accounting	14%	44%	17%	9%	5%	6%
1307.00	Hospitality	14%	43%	18%	7%	4%	6%
0614.00	Digital Media	15%	39%	20%	12%	N/A	N/A
0701.00	Information Technology, General	15%	44%	19%	10%	5%	4%
0956.70	Industrial and Occupational Safety and Health	16%	24%	N/A	14%	12%	N/A
2105.20	Probation and Parole	16%	55%	22%	N/A	N/A	N/A
0707.10	Computer Programming	17%	41%	20%	10%	5%	4%
0509.60	Display	18%	43%	20%	12%	N/A	N/A
0706.00	Computer Science (Transfer)	18%	44%	20%	9%	4%	3%
1030.00	Graphic Art and Design	18%	45%	17%	8%	4%	4%
0201.00	Architecture and Architectural Technology	21%	38%	15%	9%	5%	6%
0946.10	Energy Systems Technology	21%	32%	N/A	N/A	N/A	N/A
1303.20	Fashion Merchandising	21%	48%	14%	N/A	N/A	N/A
1005.00	Commercial Music	22%	44%	16%	6%	N/A	N/A
1009.00	Applied Design	22%	36%	12%	N/A	N/A	11%
2105.00	Administration of Justice	22%	35%	13%	9%	5%	8%
2206.00	Geography	24%	49%	13%	6%	3%	2%
0509.40	Sales and Salesmanship	27%	15%	10%	7%	7%	17%
1007.00	Dramatic Arts	28%	45%	12%	5%	2%	4%
1006.00	Technical Theater	29%	43%	12%	7%	N/A	N/A
0301.00	Environmental Science	38%	46%	8%	3%	N/A	N/A
0102.10	Veterinary Technician (Licensed)	N/A	50%	28%	N/A	N/A	N/A
0109.30	Nursery Technology	N/A	20%	25%	N/A	N/A	N/A
0303.00	Environmental Technology	N/A	10%	21%	14%	11%	N/A
0102.10	Veterinary Technician (Licensed)	N/A	50%	28%	N/A	N/A	N/A
0109.30	Nursery Technology	N/A	20%	25%	N/A	N/A	N/A
0303.00	Environmental Technology	N/A	10%	21%	14%	11%	N/A
0509.70	E-Commerce (Business emphasis)	N/A	38%	18%		N/A	N/A
0512.00	Insurance	N/A	24%	23%	12%	N/A	N/A
0514.10	Legal Office Technology	N/A	N/A	42%	N/A	N/A	N/A
0707.30	Computer Systems Analysis	N/A	50%	18%	12%	N/A	N/A
0708.20	Computer Support	N/A	12%	13%	18%	N/A	23%
0709.00	World Wide Web Administration	N/A	42%	N/A	N/A	N/A	N/A
0709.10	E-Commerce (Technology emphasis)	N/A	25%	21%	15%	N/A	N/A

TOP Code	Program Name	Age Group %					
		19 and younger	20-24	25-29	30-34	35-39	40 and older
0934.40	Electrical Systems and Power Transmission	N/A	N/A	N/A	30%	N/A	N/A
0947.20	Heavy Equipment Maintenance	N/A	N/A	50%	N/A	N/A	N/A
0950.10	Aviation Airframe Mechanics	N/A	26%	26%	N/A	N/A	N/A
0950.20	Aviation Powerplant Mechanics	N/A	35%	N/A	N/A	N/A	N/A
0952.30	Plumbing, Pipefitting and Steamfitting	N/A	26%	30%	18%	6%	N/A
0952.60	Masonry, Tile, Cement, Lath and Plaster	N/A	43%	N/A	N/A	N/A	N/A
0952.80	Drywall and Insulation	N/A	28%	33%	17%	9%	N/A
0955.00	Laboratory Science Technology	N/A	53%	22%	12%	N/A	N/A
0956.00	Manufacturing and Industrial Technology	N/A	19%	26%	14%	N/A	N/A
0957.30	Surveying	N/A	36%	27%	N/A	N/A	N/A
0999.00	Other Engineering and Related Industrial Technologies	N/A	N/A	N/A	N/A	N/A	N/A
1205.10	Phlebotomy	N/A	27%	41%	N/A	N/A	N/A
1209.00	Hospital Central Service Technician	N/A	N/A	N/A	N/A	N/A	N/A
1210.00	Respiratory Care/Therapy	N/A	N/A	42%	28%	N/A	N/A
1214.00	Orthopedic Assistant	N/A	29%	29%	N/A	N/A	N/A
1217.00	Surgical Technician	N/A	21%	25%	18%	N/A	N/A
1218.00	Occupational Therapy Technology	N/A	N/A	N/A	29%	23%	N/A
1222.00	Physical Therapist Assistant	N/A	36%	32%	16%	N/A	N/A
1223.00	Health Information Technology	N/A	19%	19%	16%	14%	N/A
1225.00	Radiologic Technology	N/A	21%	37%	16%	N/A	N/A
1230.00	Nursing	N/A	23%	34%	17%	13%	N/A
1240.20	Dental Hygienist	N/A	22%	42%	15%	N/A	N/A
1299.00	Other Health Occupations	N/A	N/A	N/A	N/A	N/A	39%
1307.10	Restaurant and Food Services and Management	N/A	44%	N/A	N/A	N/A	N/A
1307.20	Lodging Management	N/A	36%	26%	N/A	N/A	N/A
1401.00	Law, General	N/A	14%	7%	N/A	N/A	N/A
2105.10	Corrections	N/A	2%	18%	17%	15%	25%
2105.50	Police Academy	N/A	16%	28%	21%	15%	N/A
2133.10	Wildland Fire Technology	N/A	25%	19%	27%	13%	N/A
2206.10	Geographic Information Systems	N/A	41%	25%	14%	N/A	6%
1401.00	Law, General	N/A	14%	7%	N/A	N/A	N/A
1307.20	Lodging Management	N/A	36%	26%	N/A	N/A	N/A

Exhibit 14. Priority Programs (TOP Codes) Enrollment by Hispanic/Latino, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% Hispanic/ Latino
1299.00	Other Health Occupations	14%
1401.00	Law, General	17%
0934.00	Electronics and Electric Technology	23%
0707.00	Computer Software Development	24%
0708.20	Computer Support	25%
2133.00	Fire Technology	25%
1210.00	Respiratory Care/Therapy	26%
1218.00	Occupational Therapy Technology	27%
2105.10	Corrections	27%
0614.30	Website Design and Development	28%
0509.70	E-Commerce (Business emphasis)	29%
0957.30	Surveying	29%
1225.00	Radiologic Technology	29%
1240.20	Dental Hygienist	29%
0707.10	Computer Programming	30%
0706.00	Computer Science (Transfer)	31%
0950.10	Aviation Airframe Mechanics	31%
0955.00	Laboratory Science Technology	31%
1205.10	Phlebotomy	31%
2133.50	Fire Academy	31%
0950.00	Aeronautical and Aviation Technology	32%
1214.00	Orthopedic Assistant	32%
0109.00	Horticulture	33%
0509.00	Marketing and Distribution	33%
0509.60	Display	33%
0708.10	Computer Networking	33%
1230.20	Licensed Vocational Nursing	33%
0614.00	Digital Media	34%
0708.00	Computer Infrastructure and Support	34%
0709.10	E-Commerce (Technology emphasis)	34%
1208.00	Medical Assisting	34%
2105.50	Police Academy	34%
0511.00	Real Estate	35%
0502.10	Tax Studies	36%

TOP Code	Program Name	% Hispanic/ Latino
1307.00	Hospitality	36%
1307.20	Lodging Management	36%
0514.00	Office Technology/Office Computer Applications	37%
0701.00	Information Technology, General	37%
0953.00	Drafting Technology	37%
1217.00	Surgical Technician	37%
1223.00	Health Information Technology	37%
0502.00	Accounting	38%
0950.20	Aviation Powerplant Mechanics	38%
1006.00	Technical Theater	38%
2133.10	Wildland Fire Technology	38%
0102.10	Veterinary Technician (Licensed)	39%
1222.00	Physical Therapist Assistant	39%
2105.30	Industrial and Transportation Security	39%
0934.40	Electrical Systems and Power Transmission	40%
0958.00	Water and Wastewater Technology	40%
0303.00	Environmental Technology	41%
1007.00	Dramatic Arts	41%
0109.10	Landscape Design and Maintenance	42%
0514.20	Medical Office Technology	42%
1030.00	Graphic Art and Design	42%
1303.20	Fashion Merchandising	42%
0201.00	Architecture and Architectural Technology	43%
0702.10	Software Applications	43%
1005.00	Commercial Music	43%
0430.00	Biotechnology and Biomedical Technology	44%
0952.20	Electrical	44%
2206.10	Geographic Information Systems	44%
2206.00	Geography	45%
0947.00	Diesel Technology	46%
1208.20	Administrative Medical Assisting	46%
1230.00	Nursing	46%

TOP Code	Program Name	% Hispanic/ Latino
0946.00	Environmental Control Technology	47%
0956.50	Welding Technology	47%
0957.00	Civil and Construction Management Technology	47%
0509.40	Sales and Salesmanship	48%
2105.00	Administration of Justice	48%
0514.10	Legal Office Technology	50%
0702.00	Computer Information Systems	50%
0947.20	Heavy Equipment Maintenance	50%
0506.30	Management Development and Supervision	51%
0956.00	Manufacturing and Industrial Technology	51%
1402.00	Paralegal	51%
0952.30	Plumbing, Pipefitting and Steamfitting	52%
0952.00	Construction Crafts Technology	54%

TOP Code	Program Name	% Hispanic/ Latino
0709.00	World Wide Web Administration	56%
0952.10	Carpentry	57%
1009.00	Applied Design	58%
0707.30	Computer Systems Analysis	60%
1209.00	Hospital Central Service Technician	61%
0512.00	Insurance	67%
0952.80	Drywall and Insulation	73%
0301.00	Environmental Science	80%
2105.20	Probation and Parole	81%
2105.40	Forensics, Evidence, and Investigation	83%
0952.60	Masonry, Tile, Cement, Lath and Plaster	84%
0956.70	Industrial and Occupational Safety and Health	84%
0946.10	Energy Systems Technology	91%

Exhibit 15. Priority Programs (TOP Codes) Enrollment by Asian, 2016-2017[40]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% Asian
0952.10	Carpentry	1%
0956.50	Welding Technology	1%
0952.20	Electrical	2%
1005.00	Commercial Music	2%
2105.10	Corrections	2%
2133.00	Fire Technology	2%
2105.00	Administration of Justice	3%
2105.50	Police Academy	3%
0109.10	Landscape Design and Maintenance	4%
0514.20	Medical Office Technology	4%
0702.00	Computer Information Systems	4%
1402.00	Paralegal	4%
0950.00	Aeronautical and Aviation Technology	5%
0953.00	Drafting Technology	5%
0957.00	Civil and Construction Management Technology	5%
1006.00	Technical Theater	5%
1007.00	Dramatic Arts	5%
1230.00	Nursing	5%
1230.20	Licensed Vocational Nursing	5%
0946.00	Environmental Control Technology	6%
1030.00	Graphic Art and Design	6%
2206.00	Geography	6%
0702.10	Software Applications	7%
0708.00	Computer Infrastructure and Support	7%
1307.00	Hospitality	7%
0201.00	Architecture and Architectural Technology	8%
1208.20	Administrative Medical Assisting	8%
0506.30	Management Development and Supervision	9%
0509.60	Display	9%
0701.00	Information Technology, General	9%
1401.00	Law, General	9%
0511.00	Real Estate	10%
0708.10	Computer Networking	10%
1223.00	Health Information Technology	10%
1303.20	Fashion Merchandising	10%
0614.00	Digital Media	11%
0614.30	Website Design and Development	11%
0509.00	Marketing and Distribution	12%
0707.00	Computer Software Development	12%
1225.00	Radiologic Technology	12%
0514.00	Office Technology/Office Computer Applications	13%
0706.00	Computer Science (Transfer)	13%
0708.20	Computer Support	13%
1240.20	Dental Hygienist	13%
1208.00	Medical Assisting	14%
0502.00	Accounting	15%
0502.10	Tax Studies	15%
0707.10	Computer Programming	16%
0955.00	Laboratory Science Technology	18%
0430.00	Biotechnology and Biomedical Technology	21%
0934.00	Electronics and Electric Technology	22%

[40] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

Exhibit 16. Priority Programs (TOP Codes) Enrollment by Black/African American, 2016-2017[41]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% Black/AA
2133.00	Fire Technology	2%
0201.00	Architecture and Architectural Technology	3%
0502.10	Tax Studies	3%
0706.00	Computer Science (Transfer)	3%
0953.00	Drafting Technology	3%
0707.10	Computer Programming	4%
0952.00	Construction Crafts Technology	4%
0952.10	Carpentry	4%
0952.20	Electrical	4%
1230.20	Licensed Vocational Nursing	4%
2105.40	Forensics, Evidence, and Investigation	4%
0430.00	Biotechnology and Biomedical Technology	5%
0502.00	Accounting	5%
0614.30	Website Design and Development	5%
0702.00	Computer Information Systems	5%
0702.10	Software Applications	5%
0947.00	Diesel Technology	5%
0952.30	Plumbing, Pipefitting and Steamfitting	5%
0956.50	Welding Technology	5%
1030.00	Graphic Art and Design	5%
1208.20	Administrative Medical Assisting	5%
1402.00	Paralegal	5%
2105.00	Administration of Justice	5%
2105.50	Police Academy	5%
0506.30	Management Development and Supervision	6%
0614.00	Digital Media	6%
0708.00	Computer Infrastructure and Support	6%
0708.10	Computer Networking	6%
0934.00	Electronics and Electric Technology	6%
0957.00	Civil and Construction Management Technology	6%
1005.00	Commercial Music	6%
1208.00	Medical Assisting	6%
2105.10	Corrections	6%
2206.00	Geography	6%
0509.00	Marketing and Distribution	7%
0514.20	Medical Office Technology	7%
0701.00	Information Technology, General	7%
0958.00	Water and Wastewater Technology	7%
1223.00	Health Information Technology	7%
0509.40	Sales and Salesmanship	8%
0707.00	Computer Software Development	8%
0946.00	Environmental Control Technology	8%
1006.00	Technical Theater	8%
1307.00	Hospitality	8%
0511.00	Real Estate	9%
0514.00	Office Technology/Office Computer Applications	9%
1007.00	Dramatic Arts	9%
0708.20	Computer Support	10%
0303.00	Environmental Technology	13%
0512.00	Insurance	13%
2105.30	Industrial and Transportation Security	13%

[41] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

Exhibit 17. Priority Programs (TOP Codes) Enrollment by American Indian/Alaska Native, 2016-2017[42]

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% AI/AN
0502.00	Accounting	0.2%
0701.00	Information Technology, General	0.3%
0514.00	Office Technology/Office Computer Applications	0.4%
2105.00	Administration of Justice	0.5%

TOP Code	Program Name	% AI/AN
2206.00	Geography	0.5%
2105.10	Corrections	0.9%
2105.50	Police Academy	0.9%
2133.00	Fire Technology	1%

Exhibit 18. Priority Programs (TOP Codes) Enrollment by Native Hawaiian/Pacific Islander, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Data Not Available for All Programs

TOP Code	Program Name	% NH/PI
0701.00	Information Technology, General	0.4%
0514.00	Office Technology/Office Computer Applications	0.5%
2206.00	Geography	0.5%
0502.00	Accounting	0.6%

TOP Code	Program Name	% NH/PI
2105.00	Administration of Justice	0.8%
2133.00	Fire Technology	0.9%
2105.50	Police Academy	1%
2105.10	Corrections	2%

[42] Orange cells indicate significant underrepresentation and blue cells indicate significant overrepresentation in comparison to their population, $p<.05$. Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage of workers in the group than would be expected based on their population. Correspondingly, cells shaded in the darker blue indicate that there are half as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference.

Appendix B: Methodology

Key Definitions

The following are key definitions used throughout the report.

SOC code: The Standard Occupational Classification system is a federally defined system used to classify workers into occupational categories that are grouped together according to job duties.[43]

TOP code: The Taxonomy of Programs is a system of codes used by the State of California to compare differently named academic programs with similar outcomes across community colleges.[44] Each course offered by California Community Colleges is assigned to a TOP code.

Living wage: The living wage for this study is based on the Family Needs Calculator, which "measures the floor income necessary for an individual (under age 65 and without disability) or family to afford basic expenses in California." In 2021, the living wage in San Diego County was $18.43 per hour for a single adult.[45]

Priority job: A middle-skill job that requires at least a high school diploma, but less than a bachelor's degree; typically requires fewer than five years of work experience at entry; entry-level earnings are above the living wage for a single adult in San Diego County; and has at least 50 projected annual job openings in San Diego County between 2022 and 2027.

Priority program: A community college program that trains for a priority job identified in this report.

Labor force participation: People who are 16 years of age and older who are either employed or unemployed *and* seeking work are considered labor force participants.[46] Not everyone who is of working age is working or seeking work. Many people, for example, are full-time students, caregivers, disabled or retired.

Data

We used four sources of data for this project. First, we downloaded labor market information about priority jobs, including projected annual job openings between 2022 and 2027, entry-level earnings, typical entry-level education, and the demographic characteristics of people employed in priority occupations in 2020 (the most recently available data as of January 2022). This data was obtained from Lightcast (formerly EMSI), a data company that compiles labor market information from, among other sources, government organizations such as the Bureau of Labor Statistics and the US Census Bureau, and online job postings.[47] Second, information on student enrollment was obtained from the California Community Colleges Chancellor's Office data system –

[43] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. The report will use these titles to match those defined by this system. bls.gov/soc
[44] TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).
[45] Family Needs Calculator (formerly the California Family Needs Calculator)," Insight: Center for Community Economic Development, last updated 2021. insightcced.org/family-needs-calculator/.
[46] "Labor Force Statistics Glossary," U.S. Census Bureau, census.gov/topics/employment/labor-force/about/glossary.html
[47] Lightcast (formerly EMSI); QCEW, Non-QCEW, Self-Employed. SDWP pulled the labor market occupational data on January 6, 2022.

LaunchBoard[48] – which collects information on all community college students who enrolled in at least one term as a regular-admit student (i.e., "not dual or concurrently enrolled students").[49] Data from the 2016-2017 academic year were the most recent available at the start of the project and were analyzed in this report. Third, we attained contemporaneous population information on San Diego County residents from the United States Census Bureau's 2016 five-year American Community Survey Public Use Microdata Sample (ACS PUMS). The ACS collects information from approximately one percent of the population per year and PUMS data files include person-weights that allowed us to calculate accurate estimates of the 2016 county population within a 95 percent confidence interval.[50] Finally, we compiled information about active programs available at each of the colleges in the 2021 – 2022 academic year using the San Diego and Imperial Counties Community Colleges Catalog, 2021.[51]

Procedures

First, we identified San Diego County's priority jobs using the following criteria: a middle-skill job that requires at least a high school diploma, but less than a bachelor's degree; typically requires fewer than five years of work experience at entry; entry-level earnings were above the living wage for a single adult in San Diego County; and had at least 50 projected annual job openings in San Diego County between 2022 and 2027.

To analyze program data, we first reformatted the LaunchBoard data so that each row in the data file corresponded to a TOP code and included: counts of enrollments, student gender, race/ethnicity age, etc. LaunchBoard separates data by community college, district, microregion and macroregion as well as reporting statewide numbers.[52] To obtain information on San Diego County specifically, we identified TOP codes with existing programs at Imperial Valley College and at least one San Diego County community college; for each program identified, we then subtracted Imperial Valley College counts from the San Diego-Imperial County microregion counts. Then, we combined the calculated estimates with the TOP codes that needed no calculations (i.e., those that were not available at Imperial Valley College).

Next, we created demographic categories in alignment with the community college's definitions using the person weights in the ACS PUMS data and limited the sample to those aged 16 to 64. Finally, we merged the LaunchBoard data that provided educational data and the labor market occupational data using a crosswalk to determine alignment between priority jobs and TOP codes that train for those occupations.

Analysis

To evaluate significant under- or over-representation we conducted a two-sided difference-in-proportions test at the $p<.05$ level. In other words, we can be 95% confident that differences between groups are not the result of

[48] "LaunchBoard," California Community Colleges, launchboard-resources.wested.org/resources/65calpassplus.org/LaunchBoard/SWP.aspx
[49] "LaunchBoard FAQ (p.3)," California Community Colleges, launchboard-resources.wested.org/resources/65
[50] "ACS PUMS Files: The Basics," U.S. Census Bureau, census.gov/content/dam/Census/library/publications/2021/acs/acs_pums_handbook_2021_ch01.pdf
[51] San Diego and Imperial Counties Community Colleges Catalog, 2021. Data was pulled from Chancellor's Office Curriculum Inventory (COCI) 2.0. Only active programs listed were included as part of this report, and note that the status of these programs may have changed since the data was pulled. coci2.ccctechcenter.org/programs
[52] "LaunchBoard FAQ (p.3)," California Community Colleges, launchboard-resources.wested.org/resources/65

random chance. Normally, when conducting multiple comparisons, we would use a correction to reduce the likelihood of Type-I errors (i.e., false positives, or identifying a group as being under- or over-represented when in fact there was no difference in representation). Our decision not to apply a multiple-comparison correction in this project was both theoretical and practical. First, there is a trade-off when using a correction to reduce Type-I errors in that it simultaneously decreases the likelihood of identifying real effects (Abdi, 2010). We believe that the consequences of *not* identifying a significant underrepresentation of a certain group are greater than mistakenly identifying a group as such because there is no harm in increasing recruitment efforts, but an undetected underrepresentation cannot be corrected. Practically, we completed approximately 8,000 tests and applying a correction such as a sequential Bonferroni procedure (Abdi, 2010) would require assessment of statistical tests to a number of decimal places far beyond what most statistical programs can apply.

For each data table in Appendix A, orange cells indicate a demographic group is significantly underrepresented and blue cells indicate significant overrepresentation in comparison to either the labor force population or the population of enrollments across all community colleges.[53] Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage in the group than would be expected compared to the population (i.e., the labor force population or the population of enrollments). Correspondingly, cells shaded in dark blue indicate that there are half again as many workers in the group than would be expected given their representation in the population of interest. Cells with no fill color indicate there was no statistically significant difference in the sample as compared to their representation in the labor force or community college student population, based on which was compared.

Equity Analyses for Enrollment

We calculated the percentage of enrollment rates for each group from the total number of enrollments (i.e., the sum of all racial and ethnic groups should total approximately 100 percent).[54] Equity analyses compared the percentage of students by demographic group enrolled in each priority program to the percentage of enrollments in all of the community colleges. We know from the analyses that enrollment patterns do not exactly mirror the wider San Diego County population; we use the overall pattern of enrollments as the comparison set because it is reflective of the number of people who are available to enroll in programs.

It is important to note that values may appear similar, but imply different results. For example, enrollments in accounting (TOP code 0502.00) suggest approximately equal representation of females and males in the program's enrollees; yet, results show that women are slightly underrepresented and men are slightly overrepresented. By comparing the total number of people available to enroll (that is, the total number of people enrolled in the county's nine community colleges), however, women enroll in accounting at a significantly lower rate than expected given their representation in the community college population (54 percent).

[54] Or slightly less if there was missing or masked data.

Acknowledgments and Disclaimers

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IMPORTANT DISCLAIMERS

The Center of Excellence (COE) for the San Diego and Imperial Counties Community Colleges encourages stakeholders to use this study as a resource for meaningful discussions about targeted recruitment and retention strategies. This report does not conduct a supply gap analysis and should not be used as the sole basis for decision-making; requirements for proposals of new or modified programs or courses are outlined in the Regional Program Recommendation Process.

All representations included in this report have been produced from secondary research and a review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the COE, COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.