

Equity Gaps in Priority Jobs and Programs

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

IMPERIAL COUNTY



JULY 2023

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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 (SDWP) to analyze labor market and postsecondary education data to identify 1) priority jobs and priority programs in Imperial County 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 10 annual job openings in Imperial County¹
- Pay at or above the living wage of \$15.24 per hour for a single adult in Imperial County
- Typically require fewer than five years of work experience at entry

This report identified 33 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 Imperial County. Females and males were significantly underrepresented in 20 and 10 priority jobs, respectively. Twenty-seven jobs were underrepresented by Hispanics/Latinos. Additionally, 16 occupations were significantly overrepresented by individuals ages 55 and over, indicating a retiring workforce.

Priority programs are defined as community college programs that train for priority jobs.² There are 11 priority programs, as of 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 four programs, males in one program, and students 19 and younger in three programs.

The COE recommends strategies such as targeted recruitment and retention efforts for priority programs, which could 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.**

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 "Priority programs" are defined by Taxonomy of Programs (TOP) codes. In other words, there were 11 TOP codes as of Fall 2021 Imperial County. See Appendix B: Methodology for information about the data.

Introduction

Community colleges are the primary resource for preparing workers in *middle-skill jobs*³ – jobs that require more than a high school diploma, but less than a four-year degree. According to the National Skills Coalition,⁴ 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 (SOC) system.⁵ Of the 867 SOC occupations, 33 require less than a bachelor’s degree, but more than a high school diploma; have more than 10 projected annual job openings in Imperial County between 2022-2027;⁶ provide entry-level wages are at or above the living wage, which is \$15.24 per hour for a single adult in Imperial County; and require fewer than five years of experience at entry. The living wage is calculated using the Insight Center for Community Economic Development’s Family Needs Calculator.⁷ For the purpose of this study, these 33 high-demand, high-wage occupations are referred to as *priority jobs* (Exhibit 1).

Exhibit 1. Total SOC Occupations and Priority Jobs



³ “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](https://www.aei.org/wp-content/uploads/2017/11/The-Path-Less-Taken.pdf?x91208)

⁴ “The California Skills Mismatch,” National Skills Coalition, nationalskillscoalition.org/skills-mismatch/california-skills-mismatch

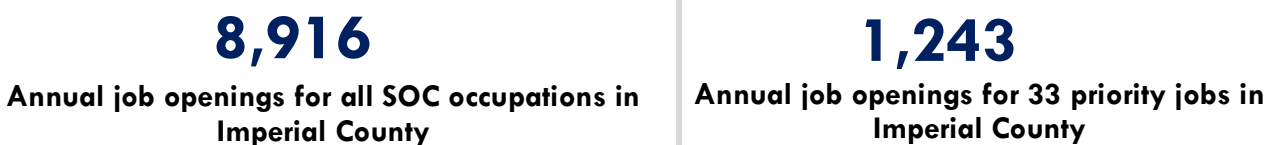
⁵ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. The report will use these titles to match those defined by this system. [bls.gov/soc](https://www.bls.gov/soc)

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

⁷ “Family Needs Calculator” (formerly the California Family Needs Calculator), Insight Center for Community Economic Development, last updated 2021. insightccd.org/family-needs-calculator

In terms of labor market demand, these 33 priority jobs are projected to have 1,243 annual job openings between 2022 and 2027, which is approximately 14 percent of all annual job openings in Imperial County (Exhibit 2).

Exhibit 2. Labor Market Demand: Average Annual Job Openings in Imperial County, 2022-2027⁸



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.⁹ 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.¹⁰ This report identified 11 TOP codes or priority programs that prepare students for the 33 priority jobs. Multiple program offerings exist across the 11 TOP codes, resulting in a total of 21 active programs in Imperial County as of Fall 2021 (the most current year of data at the time of the study).

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.

⁸ Annual job openings for all SOC occupations revised with 2022.04 Lightcast data. Occupational Table.

⁹ "Taxonomy of Programs," California Community Colleges, [ccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx](https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx)

¹⁰ 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 Imperial County

The following table lists the 33 SOC occupations that met the priority jobs definition for this study (Exhibit 3). 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 3. SOC Codes and Occupational Titles for Priority Jobs in Imperial County

SOC Code	Description	SOC Code	Description
21-1093	Social and Human Service Assistants	43-4061	Eligibility Interviewers, Government Programs
29-2052	Pharmacy Technicians	43-4199	Information and Record Clerks, All Other
29-2061	Licensed Practical and Licensed Vocational Nurses	43-5061	Production, Planning, and Expediting Clerks
31-9091	Dental Assistants	47-2073	Operating Engineers and Other Construction Equipment Operators
31-9097	Phlebotomists	47-2231	Solar Photovoltaic Installers
33-3012	Correctional Officers and Jailers	47-5041	Continuous Mining Machine Operators
33-3021	Detectives and Criminal Investigators	49-1011	First-Line Supervisors of Mechanics, Installers, Repairers
33-3051	Police and Sheriff's Patrol Officers	47-2031	Carpenters
33-9021	Private Detectives and Investigators	47-2061	Construction Laborers
33-9093	Transportation Security Screeners	49-3042	Mobile Heavy Equipment Mechanics, Except Engines
35-2012	Cooks, Institution and Cafeteria	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers
41-1011	First-Line Supervisors of Retail Sales Workers	49-9041	Industrial Machinery Mechanics
41-2012	Gambling Change Persons and Booth Cashiers	51-1011	First-Line Supervisors of Production and Operating Workers
41-3091	Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	51-8013	Power Plant Operators
41-4012	Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	51-8031	Water and Wastewater Treatment Plant and System Operators
43-1011	First-Line Supervisors of Office and Administrative Support Workers	53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors
		53-3032	Heavy and Tractor-Trailer Truck Drivers

Priority Programs

Priority programs are TOP codes related to at least one SOC code in the priority jobs list (Exhibit 4). Based on this definition, there are 11 TOP codes or priority programs¹¹ at Imperial Valley College. Within these 11 TOP codes, a combined 21 academic programs were active as of Fall 2021 (see Appendix A).¹²

Exhibit 4. 11 TOP Codes for Priority Programs in Imperial County

TOP Code	Program Name
0112.00	Agriculture Business, Sales and Service
0506.30	Management Development and Supervision
0514.00	Office Technology/Office Computer Applications
0934.00	Electronics and Electric Technology
0946.00	Environmental Control Technology
0948.00	Automotive Technology
0958.00	Water and Wastewater Technology
1230.20	Licensed Vocational Nursing
2105.00	Administration of Justice
2105.10	Corrections
2105.50	Police Academy

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).

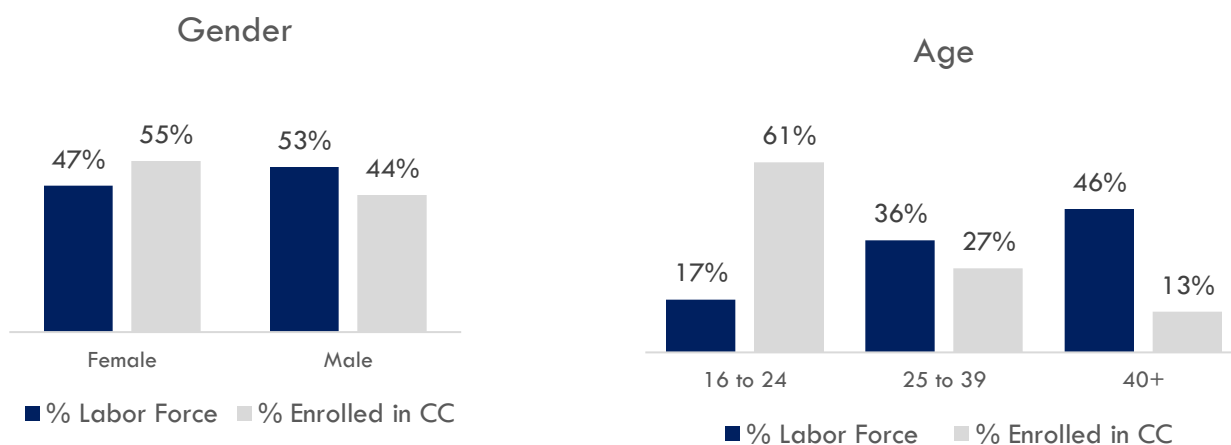
¹² The California Community Colleges Chancellor's Office LaunchBoard provides data for individual colleges and for regions, but not for counties. Imperial County data were calculated by subtracting Imperial Valley College values from Imperial regional values. Enrollment data (2016-2017) was the most recent data available at the start of the project and more recent years are now available.

Examining Equity Gaps

This section provides the demographic composition (gender, age, race/ethnicity) of labor force participants and community college students in Imperial 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 Imperial County’s labor force.¹³ 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 112,000 individuals of working age (16-64 years) residing in Imperial County. Nearly 60 percent of the working-age population participated in the labor force (68,394 residents) and 10 percent were enrolled in community colleges (10,599) 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 (55 percent vs. 47 percent) and was generally younger (61 percent vs. 17 percent) (Exhibit 5).¹⁴ Detailed figures and percentages for these demographic categories can be found in Appendix A.

Exhibit 5. Labor Force Participants¹⁵ and Community College Enrollments in Imperial County by Gender and Age¹⁶



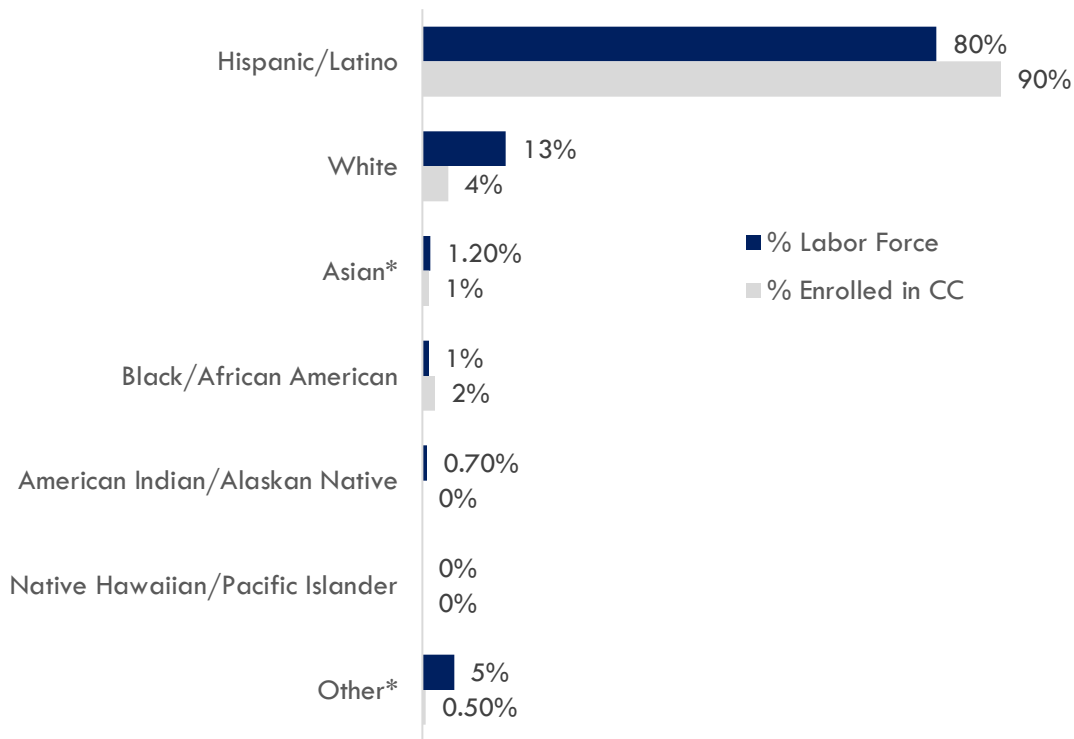
¹³ Information about how these comparison groups were defined and how analyses were conducted can be found in Appendix B: Methodology.

¹⁴ 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.

¹⁵ "Labor Force Statistics Glossary," U.S. Census Bureau, [census.gov/topics/employment/labor-force/about/glossary.html](https://www.census.gov/topics/employment/labor-force/about/glossary.html)

¹⁶ 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.

Exhibit 6. Labor Force Participants¹⁷ and Community College Enrollments in Imperial County by Race/Ethnicity¹⁸



*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, Hispanic/Latino residents made up the vast majority of the labor force and community college enrollment (80 percent and 90 percent respectively). White residents were far more represented in the labor force than community college enrollment (13 percent vs. 4 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.

¹⁷ "Labor Force Statistics Glossary," U.S. Census Bureau, [census.gov/topics/employment/labor-force/about/glossary.html](https://www.census.gov/topics/employment/labor-force/about/glossary.html)

¹⁸ 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.

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 Imperial County’s labor force. The statistical analysis found that females were significantly underrepresented in 20 priority jobs; males in 10; Hispanics/Latinos in 27. Additionally, individuals aged 55 and older were overrepresented in 16 priority jobs (Exhibit 7). For the demographic composition (gender, age, ethnicity/race) in each priority job, see Appendix A.

Exhibit 7. Number of Priority Jobs with Significant Under- or Overrepresentation by Demographic Group

Demographic Group	# Jobs with Underrepresentation	# Jobs with Overrepresentation
Females	20	
Males	10	
Ages 55 and older		16
Hispanics/Latinos	27	

Priority Jobs Underrepresented by Females

Compared to the percentage of females participating in the labor force, females were significantly underrepresented in 20 priority jobs (Exhibit 8). The occupations with the lowest representation of females were “Mobile Heavy Equipment Mechanics, Except Engines,” “Operating Engineers and Other Construction Equipment Operators,” and “Heating, Air Conditioning, and Refrigeration Mechanics and Installers.”

Exhibit 8. Priority Jobs Represented by Females in Imperial County¹⁹

Orange cells = significant underrepresentation

Blue cells = significant overrepresentation

SOC Code	Description	% Female
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	1%
47-2073	Operating Engineers and Other Construction Equipment Operators	2%
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2%
49-9041	Industrial Machinery Mechanics	2%
47-2031	Carpenters	2%
51-8013	Power Plant Operators	3%
47-2061	Construction Laborers	4%
47-5041	Continuous Mining Machine Operators	4%
53-3032	Heavy and Tractor-Trailer Truck Drivers	4%
49-1011	First-Line Supervisors of Mechanics, Installers, Repairers	5%
47-2231	Solar Photovoltaic Installers	6%
51-8031	Water and Wastewater Treatment Plant and System Operators	7%
51-1011	First-Line Supervisors of Production and Operating Workers	14%
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	18%
33-3051	Police and Sheriff's Patrol Officers	19%
41-4012	Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	22%
33-3021	Detectives and Criminal Investigators	30%
41-3091	Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	32%
33-9093	Transportation Security Screeners	33%

¹⁹ 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 Code	Description	% Female
33-3012	Correctional Officers and Jailers	33%
33-9021	Private Detectives and Investigators	41%
41-1011	First-Line Supervisors of Retail Sales Workers	45%
43-5061	Production, Planning, and Expediting Clerks	53%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	66%
35-2012	Cooks, Institution and Cafeteria	67%
31-9097	Phlebotomists	75%
29-2052	Pharmacy Technicians	75%
21-1093	Social and Human Service Assistants	78%
43-4199	Information and Record Clerks, All Other	79%
41-2012	Gambling Change Persons and Booth Cashiers	80%
43-4061	Eligibility Interviewers, Government Programs	85%
29-2061	Licensed Practical and Licensed Vocational Nurses	88%
31-9091	Dental Assistants	93%

Priority Jobs Underrepresented by Males

Compared to the percentage of males participating in the labor force, males were significantly underrepresented in 10 priority jobs (Exhibit 9). Occupations with the lowest representation of males were “Dental Assistants,” “Licensed Practical and Licensed Vocational Nurses,” and “Eligibility Interviewers, Government Programs.”

Exhibit 9. Priority Jobs Represented by Males in Imperial County

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

SOC Code	Description	% Male
31-9091	Dental Assistants	7%
29-2061	Licensed Practical and Licensed Vocational Nurses	12%
43-4061	Eligibility Interviewers, Government Programs	15%
41-2012	Gambling Change Persons and Booth Cashiers	20%
43-4199	Information and Record Clerks, All Other	21%
21-1093	Social and Human Service Assistants	22%
29-2052	Pharmacy Technicians	25%
31-9097	Phlebotomists	25%
35-2012	Cooks, Institution and Cafeteria	33%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	34%
43-5061	Production, Planning, and Expediting Clerks	47%
41-1011	First-Line Supervisors of Retail Sales Workers	55%
33-9021	Private Detectives and Investigators	59%
33-9093	Transportation Security Screeners	67%
33-3012	Correctional Officers and Jailers	67%
41-3091	Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	68%
33-3021	Detectives and Criminal Investigators	70%
41-4012	Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	78%
33-3051	Police and Sheriff's Patrol Officers	81%
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	82%
51-1011	First-Line Supervisors of Production and Operating Workers	86%
51-8031	Water and Wastewater Treatment Plant and System Operators	93%
47-2231	Solar Photovoltaic Installers	94%

SOC Code	Description	% Male
49-1011	First-Line Supervisors of Mechanics, Installers, Repairers	95%
53-3032	Heavy and Tractor-Trailer Truck Drivers	96%
47-2061	Construction Laborers	96%
47-5041	Continuous Mining Machine Operators	96%
51-8013	Power Plant Operators	97%
47-2073	Operating Engineers and Other Construction Equipment Operators	98%
47-2031	Carpenters	98%
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	98%
49-9041	Industrial Machinery Mechanics	98%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	99%

Priority Jobs Overrepresented by Ages 55+ (Retiring Workforce)

Exhibit 10 shows that 16 priority jobs had a significant overrepresentation of workers close to retirement age (individuals ages 55 and over). The top occupations were “First-Line Supervisors of Mechanics, Installers, Repairers,” “Water and Wastewater Treatment Plant and System Operators,” and “Heavy and Tractor-Trailer Truck Drivers.”

Exhibit 10. Priority Jobs Represented by Ages 55+ in Imperial County

Blue cells = significant overrepresentation

Description	% 55+ Years Old
First-Line Supervisors of Mechanics, Installers, Repairers	26%
Water and Wastewater Treatment Plant and System Operators	26%
Heavy and Tractor-Trailer Truck Drivers	24%
Eligibility Interviewers, Government Programs	23%
Industrial Machinery Mechanics	22%
First-Line Supervisors of Production and Operating Workers	22%
First-Line Supervisors of Office and Administrative Support Workers	22%
Information and Record Clerks, All Other	22%

Description	% 55+ Years Old
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	22%
Operating Engineers and Other Construction Equipment Operators	22%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	22%
Power Plant Operators	21%
Mobile Heavy Equipment Mechanics, Except Engines	21%
Social and Human Service Assistants	20%
Production, Planning, and Expediting Clerks	20%
Licensed Practical and Licensed Vocational Nurses	19%
Transportation Security Screeners	18%
Cooks, Institution and Cafeteria	18%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	16%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	16%
Private Detectives and Investigators	16%
Carpenters	15%
Gambling Change Persons and Booth Cashiers	15%
Solar Photovoltaic Installers	15%
Continuous Mining Machine Operators	14%
Correctional Officers and Jailers	13%
Detectives and Criminal Investigators	13%
First-Line Supervisors of Retail Sales Workers	13%
Construction Laborers	13%
Dental Assistants	12%
Pharmacy Technicians	9%
Police and Sheriff's Patrol Officers	9%
Phlebotomists	9%

Priority Jobs Underrepresented by Race/Ethnicity

Exhibit 11 shows that 22 out of 33 priority jobs had underrepresentation by the Hispanic/Latino population. All other race/ethnicity percentages in these priority occupations were commensurate with the percentage of labor force participants.

Exhibit 11. Priority Jobs Represented by Hispanic/Latino in Imperial County

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

Occupational Title	Hispanic/ Latino %
Water and Wastewater Treatment Plant and System Operators	29%
Information and Record Clerks, All Other	34%
Detectives and Criminal Investigators	35%
Transportation Security Screeners	36%
Police and Sheriff's Patrol Officers	37%
Correctional Officers and Jailers	41%
Gambling Change Persons and Booth Cashiers	43%
Eligibility Interviewers, Government Programs	44%
Pharmacy Technicians	50%
Licensed Practical and Licensed Vocational Nurses	55%
First-Line Supervisors of Mechanics, Installers, Repairers	55%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	57%
First-Line Supervisors of Office and Administrative Support Workers	57%
Operating Engineers and Other Construction Equipment Operators	57%
First-Line Supervisors of Retail Sales Workers	59%
Power Plant Operators	60%
Production, Planning, and Expediting Clerks	61%
Phlebotomists	64%
Private Detectives and Investigators	64%
Mobile Heavy Equipment Mechanics, Except Engines	64%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	65%
Cooks, Institution and Cafeteria	66%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	67%
First-Line Supervisors of Production and Operating Workers	70%
Industrial Machinery Mechanics	71%
Continuous Mining Machine Operators	72%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	72%
Social and Human Service Assistants	74%
Dental Assistants	75%
Heavy and Tractor-Trailer Truck Drivers	81%
Solar Photovoltaic Installers	83%
Carpenters	84%
Construction Laborers	85%

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 four priority programs; males in one; ages 19 and younger in three. Overall, six of the 11 priority programs (55 percent) had 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.

Program Enrollment Underrepresented by Females

Compared to overall community college enrollments, females were significantly underrepresented in four priority programs (Exhibit 12). Those programs with the lowest female enrollments were Automotive Technology (0948.00), Police Academy (2105.50), Administration of Justice (2105.00), and Corrections (2105.10).

Exhibit 12. Priority Program Enrollment Represented by Females, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

TOP Code	Program Name	Students Enrolled	% Female
0948.00	Automotive Technology	152	8%
2105.50	Police Academy	85	26%
2105.00	Administration of Justice	1,042	43%
2105.10	Corrections	213	44%
0506.30	Management Development and Supervision	30	60%
0514.00	Office Technology/Office Computer Applications	290	77%
1230.20	Licensed Vocational Nursing	23	78%
0112.00	Agriculture Business, Sales and Service	28	N/A
0934.00	Electronics and Electric Technology	125	N/A
0946.00	Environmental Control Technology	75	N/A
0958.00	Water and Wastewater Technology	84	N/A

Program Enrollment Underrepresented by Males

Compared to overall community college enrollments, males were significantly underrepresented in one program: Office Technology/Office Computer Applications (Exhibit 13).

Exhibit 13. Priority Program Enrollment Represented by Males, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

TOP Code	Program Name	Students Enrolled	% Male
0514.00	Office Technology/Office Computer Applications	290	22%
0506.30	Management Development and Supervision	30	37%
2105.10	Corrections	213	55%
2105.00	Administration of Justice	1,042	57%
2105.50	Police Academy	85	74%
0948.00	Automotive Technology	152	91%
0112.00	Agriculture Business, Sales and Service	28	N/A
0934.00	Electronics and Electric Technology	125	N/A
0946.00	Environmental Control Technology	75	N/A
0958.00	Water and Wastewater Technology	84	N/A
1230.20	Licensed Vocational Nursing	23	N/A

Program Enrollment Underrepresented by Age 19 and Younger

Compared to overall community college enrollments, individuals 19 and younger were significantly underrepresented in three programs (Exhibit 14). The programs with the lowest representation from this age group were Office Technology/Office Computer Applications (0514.00), Electronics and Electric Technology (0934.00), and Corrections (2105.10).

Exhibit 14. Priority Program Enrollment Represented by Age 19 and Younger, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

TOP Code	Program Name	Students Enrolled	% 19 and Younger
0514.00	Office Technology/Office Computer Applications	290	6%
0934.00	Electronics and Electric Technology	125	11%
2105.10	Corrections	213	18%
0948.00	Automotive Technology	152	25%
2105.00	Administration of Justice	1,042	37%
0112.00	Agriculture Business, Sales and Service	28	N/A
0506.30	Management Development and Supervision	30	N/A
0946.00	Environmental Control Technology	75	N/A
0958.00	Water and Wastewater Technology	84	N/A
1230.20	Licensed Vocational Nursing	23	N/A
2105.50	Police Academy	85	N/A

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 belonging²⁰ strategies, particularly in their targeted recruitment and retention efforts.

RECOMMENDATION #1: Imperial Valley College should work with employers to diversify employment in priority jobs and increase underrepresented groups' interest in these positions.

Analyses showed that all 33 priority jobs had underrepresentation of at least one demographic group or overrepresentation of individuals aged 55 or older (i.e., retiring workforce). IVC 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 "Industrial Machinery Mechanics," as these positions have significant overrepresentation of a retiring workforce and an underrepresentation of female workers. Here are some questions to ask employers:

REFLECTION QUESTIONS

- Do you currently employ or plan to hire for any of the priority jobs listed in Exhibit 15?
- 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?

RECOMMENDATION #2: Imperial Valley College should develop targeted recruitment and retention strategies for priority programs with significantly underrepresented groups. Statistical analyses revealed that six of the 11 priority programs (55 percent) had at least one underrepresented demographic group in terms of age, gender, or race/ethnicity (Exhibit 16 lists these programs). IVC can use this information to create targeted marketing campaigns for specific demographics, like the 19 and younger age demographic which was significantly underrepresented in the Electronics and Electric Technology (TOP 0934.00) priority program. An example of how this could look is how 3fold

²⁰ Also known as Equity, Diversity, Inclusion, and Belonging (EDIB). developingchild.harvard.edu/equity-diversity-inclusion-and-belonging

Communications (a higher education marketing firm) contracted with San Diego Mesa College to increase enrollment in their Career and Technical Education programs.²¹

3fold's strategy to increase Mesa College's included auditing current marketing assets, interviewing stakeholders by program, creating "micro media plans" for each program, an environmental scan of web and print material, establishing Key Performance Indicators (KPIs), developing concepts, messaging and creative assets and project managing the initiative to ensure milestones are met.²²

REFLECTION QUESTIONS

- Has your college worked with industry and local employers to promote hiring of underrepresented groups?
- 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, youth)? How could you apply those strategies to promote priority programs to 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.**

²¹ 3fold Communications, Career Education, Program-Specific Marketing Support, March 2023.

²² 3fold Communications, Career Education, Program-Specific Marketing Support, March 2023. Full marketing brief is available upon request.

Appendix A: Data Tables

Exhibit 15. Statistically Significant Under- or Overrepresentation by Demographic Group (Priority Jobs)

Priority Job	Female	Male	Hispanic/ Latino	Ages 55+ (Over- represented)
Carpenters	.			
Construction Laborers	.			
Cooks, Institution and Cafeteria		.	.	
Continuous Mining Machine Operators	.			
Correctional Officers and Jailers	.		.	
Dental Assistants		.		
Detectives and Criminal Investigators	.		.	
Eligibility Interviewers, Government Programs		.	.	.
First-Line Supervisors of Mechanics, Installers, Repairers	.		.	.
First-Line Supervisors of Office and Administrative Support Workers		.	.	.
First-Line Supervisors of Production and Operating Workers	.		.	.
First-Line Supervisors of Retail Sales Workers			.	
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	.		.	
Gambling Change Persons and Booth Cashiers		.	.	
Heavy and Tractor-Trailer Truck Drivers	.			.
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	.		.	
Industrial Machinery Mechanics	.			.
Information and Record Clerks, All Other		.	.	.
Licensed Practical and Licensed Vocational Nurses		.	.	.
Mobile Heavy Equipment Mechanics, Except Engines	.		.	.
Operating Engineers and Other Construction Equipment Operators	.		.	.
Pharmacy Technicians		.	.	
Phlebotomists		.	.	

Priority Job	Female	Male	Hispanic/ Latino	Ages 55+ (Over- represented)
Police and Sheriff's Patrol Officers	•		•	
Private Detectives and Investigators			•	
Power Plant Operators	•		•	•
Production, Planning, and Expediting Clerks			•	
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	•		•	
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	•		•	•
Social and Human Service Assistants		•	•	•
Solar Photovoltaic Installers	•			
Transportation Security Screeners	•		•	
Water and Wastewater Treatment Plant and System Operators	•		•	•

Exhibit 16. Statistically Significant Underrepresentation by Demographic Group (Priority Programs)

TOP Code	Priority Program	Female	Male	Hispanic/ Latino	Ages 19 or Younger
0112.00	Agriculture Business, Sales and Service				
0506.30	Management Development and Supervision				
0514.00	Office Technology/Office Computer Applications		•		•
0934.00	Electronics and Electric Technology				•
0946.00	Environmental Control Technology				
0948.00	Automotive Technology	•			
0958.00	Water and Wastewater Technology				
1230.20	Licensed Vocational Nursing				
2105.00	Administration of Justice	•			
2105.10	Corrections	•			•
2105.50	Police Academy	•			

Exhibit 17. Annual Openings, Entry-Level Wages, and Typical Education for Priority Jobs, 2022-2027²³

SOC Code	Occupational Title	Annual Job Openings	Entry-Level Wages	Typical Entry-Level Education
47-2031	Carpenters	13	\$22.01	High school
47-2061	Construction Laborers	24	\$15.89	None
35-2012	Cooks, Institution and Cafeteria	13	\$15.73	None
47-5041	Continuous Mining Machine Operators	13	\$27.29	None
33-3012	Correctional Officers and Jailers	101	\$28.40	High school
31-9091	Dental Assistants	22	\$16.75	Certificate
33-3021	Detectives and Criminal Investigators	54	\$38.47	High school
43-4061	Eligibility Interviewers, Government Programs	15	\$19.71	High school
49-1011	First-Line Supervisors of Mechanics, Installers, Repairers	17	\$27.53	High school
43-1011	First-Line Supervisors of Office and Administrative Support Workers	52	\$19.83	High school
51-1011	First-Line Supervisors of Production and Operating Workers	20	\$17.96	High school
41-1011	First-Line Supervisors of Retail Sales Workers	57	\$16.40	High school
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	18	\$17.78	High school
41-2012	Gambling Change Persons and Booth Cashiers	27	\$15.68	None
53-3032	Heavy and Tractor-Trailer Truck Drivers	99	\$20.83	Certificate
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	14	\$21.57	Certificate
49-9041	Industrial Machinery Mechanics	12	\$21.07	High school
43-4199	Information and Record Clerks, All Other	11	\$17.35	High school
29-2061	Licensed Practical and Licensed Vocational Nurses	32	\$19.93	Certificate
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	14	\$25.25	High school
47-2073	Operating Engineers and Other Construction Equipment Operators	17	\$21.61	High school
29-2052	Pharmacy Technicians	13	\$16.00	High school
31-9097	Phlebotomists	11	\$15.93	Certificate
33-3051	Police and Sheriff's Patrol Officers	24	\$27.17	High school
33-9021	Private Detectives and Investigators	23	\$25.82	High school
51-8013	Power Plant Operators	24	\$24.14	High school
43-5061	Production, Planning, and Expediting Clerks	11	\$22.42	High school

²³ 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
41-3091	Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	18	\$20.72	High school
41-4012	Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	37	\$20.71	High school
21-1093	Social and Human Service Assistants	71	\$17.68	High school
47-2231	Solar Photovoltaic Installers	11	\$23.53	High school
33-9093	Transportation Security Screeners	11	\$28.00	High school
51-8031	Water and Wastewater Treatment Plant and System Operators	12	\$23.10	High school

Exhibit 18. TOP Codes, Enrollment, Award Type, and Units for Priority Programs in Imperial Valley College^{24 25 26}

TOP Code	Program Name	Enrollment	Associate of Science or Arts	Associate Degree for Transfer	Certificate of Achievement	Certificate Units	Major Units	Noncredit Program
0112.00	Agriculture Business, Sales and Service	28			.	18 - 19		
0506.30	Management Development and Supervision	30						.
0514.00	Office Technology/Office Computer Applications	290	.		.	26	29	
0934.00	Electronics and Electric Technology	125	.		.	16	19	
0946.00	Environmental Control Technology	75	.		.	17	30	
0948.00	Automotive Technology	152	.		.	18 - 39	39	
0958.00	Water and Wastewater Technology	84	.		.	18 - 30	18	
1230.20	Licensed Vocational Nursing	23	.		.	64	53	
2105.00	Administration of Justice	1042	.	.	.	22	18 - 24	
2105.10	Corrections	213	.		.	16 - 25	24	
2105.50	Police Academy	85	.		.	38.5	38.5	

²⁴ 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

²⁵ 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

²⁶ These numbers are not unduplicated. Students can enroll in multiple courses in a single TOP code.

Exhibit 19. Imperial Residents, Labor Force Participants, and Community College Enrollments, 2016²⁷

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

	RESIDENTS		LABOR FORCE		COMMUNITY COLLEGE ENROLLMENT	
	# of Residents	% Residents	# in Labor Force	% Labor Force	# Enrolled	% Enrolled
TOTAL	112,106	100%	68,394	100%	10,599	100%
GENDER	Residents		Labor Force		Enrollment	
Male	58,800	52%	35,957	53%	4,657	44%
Female	53,306	48%	32,437	47%	5,859	55%
RACE/ETHNICITY	Residents		Labor Force		Enrollment	
American Indian or Alaska Native	777	0.7%	478	0.7%	0	0%
Asian ²⁸	1,029	0.9%	514	0.8%	54	1%
Black or African American	3,393	3%	960	1%	166	2%
Filipino	334	0.3%	294	0.4%	0	0%
Hispanic	88,020	79%	54,474	80%	9,543	90%
Native Hawaiian or Other Pacific Islander	71	0.1%	11	0%	0	0%
Other	93	0.1%	0	0%	-	-
Two or more races	5,477	5%	3,103	5%	57	0.5%
White	12,912	12%	8,560	13%	460	4%
AGE	Residents		Labor Force		Enrollment	
16 to 19	11,113	10%	2,606	4%	2,584	24%
20 to 24	14,853	13%	9,008	13%	3,916	37%
25 to 29	13,092	12%	8,949	13%	1,443	14%
30 to 34	11,953	11%	8,509	12%	795	8%
35 to 39	10,956	10%	7,530	11%	550	5%
40 to 49	21,380	19%	15,273	22%	714	7%
50 to 64	28,759	26%	16,519	24%	597	6%

(may not equal 100 percent due to rounding or incomplete data)

²⁷ 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.

²⁸ Consistent with the U.S. Census, 'Asian' included 'Filipino,' data.census.gov/cedsci/table

Exhibit 20. Priority Jobs by Gender Percentage in Occupation in Imperial County²⁹

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

SOC Occupational Title	% Female	% Male
Mobile Heavy Equipment Mechanics, Except Engines	1%	99%
Carpenters	2%	98%
Operating Engineers and Other Construction Equipment Operators	2%	98%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2%	98%
Industrial Machinery Mechanics	2%	98%
Power Plant Operators	3%	97%
Construction Laborers	4%	96%
Continuous Mining Machine Operators	4%	96%
Heavy and Tractor-Trailer Truck Drivers	4%	96%
First-Line Supervisors of Mechanics, Installers, Repairers	5%	95%
Solar Photovoltaic Installers	6%	94%
Water and Wastewater Treatment Plant and System Operators	7%	93%
First-Line Supervisors of Production and Operating Workers	14%	86%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	18%	82%
Police and Sheriff's Patrol Officers	19%	81%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	22%	78%
Detectives and Criminal Investigators	30%	70%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	32%	68%
Transportation Security Screeners	33%	67%
Correctional Officers and Jailers	33%	67%
Private Detectives and Investigators	41%	59%
First-Line Supervisors of Retail Sales Workers	45%	55%
Production, Planning, and Expediting Clerks	53%	47%
First-Line Supervisors of Office and Administrative Support Workers	66%	34%
Cooks, Institution and Cafeteria	67%	33%
Phlebotomists	75%	25%
Pharmacy Technicians	75%	25%

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.

SOC Occupational Title	% Female	% Male
Social and Human Service Assistants	78%	22%
Information and Record Clerks, All Other	79%	21%
Gambling Change Persons and Booth Cashiers	80%	20%
Eligibility Interviewers, Government Programs	85%	15%
Licensed Practical and Licensed Vocational Nurses	88%	12%
Dental Assistants	93%	7%

Exhibit 21. Priority Jobs Represented by American Indian/Alaskan Native in Occupation

Occupational Title	American Indian/ Alaskan Native %
Private Detectives and Investigators	0.1%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	0.1%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	0.1%
Construction Laborers	0.1%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	0.1%
Solar Photovoltaic Installers	0.1%
First-Line Supervisors of Office and Administrative Support Workers	0.2%
Production, Planning, and Expediting Clerks	0.2%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.2%
Heavy and Tractor-Trailer Truck Drivers	0.2%
First-Line Supervisors of Retail Sales Workers	0.2%
Social and Human Service Assistants	0.5%
Carpenters	0.3%
Cooks, Institution and Cafeteria	0.3%
Pharmacy Technicians	0.3%
First-Line Supervisors of Mechanics, Installers, Repairers	0.4%
Mobile Heavy Equipment Mechanics, Except Engines	0.4%
Licensed Practical and Licensed Vocational Nurses	0.4%
First-Line Supervisors of Production and Operating Workers	0.4%
Police and Sheriff's Patrol Officers	0.4%
Industrial Machinery Mechanics	0.5%
Detectives and Criminal Investigators	0.6%
Operating Engineers and Other Construction Equipment Operators	0.6%
Dental Assistants	0.6%
Phlebotomists	0%
Transportation Security Screeners	0.7%
Correctional Officers and Jailers	0.7%
Gambling Change Persons and Booth Cashiers	0.9%
Eligibility Interviewers, Government Programs	1%
Continuous Mining Machine Operators	1%
Power Plant Operators	1%
Water and Wastewater Treatment Plant and System Operators	1%
Information and Record Clerks, All Other	2%

Exhibit 22. Priority Jobs Represented by Asian in Occupation³⁰

Orange cells = significant underrepresentation

Blue cells = significant overrepresentation

Occupational Title	Asian %
Continuous Mining Machine Operators	0.2%
Solar Photovoltaic Installers	0.7%
Construction Laborers	0.7%
Operating Engineers and Other Construction Equipment Operators	0.8%
Heavy and Tractor-Trailer Truck Drivers	0.8%
Carpenters	0.9%
Mobile Heavy Equipment Mechanics, Except Engines	2%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	2%
Industrial Machinery Mechanics	2%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	2%
Power Plant Operators	2%
First-Line Supervisors of Production and Operating Workers	3%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	3%
Private Detectives and Investigators	4%
Social and Human Service Assistants	4%
Correctional Officers and Jailers	4%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	4%
First-Line Supervisors of Mechanics, Installers, Repairers	4%
First-Line Supervisors of Retail Sales Workers	5%
Production, Planning, and Expediting Clerks	5%
Dental Assistants	5%
Water and Wastewater Treatment Plant and System Operators	7%
Cooks, Institution and Cafeteria	7%
First-Line Supervisors of Office and Administrative Support Workers	7%
Detectives and Criminal Investigators	9%
Police and Sheriff's Patrol Officers	9%
Licensed Practical and Licensed Vocational Nurses	11%
Phlebotomists	11%
Pharmacy Technicians	16%
Gambling Change Persons and Booth Cashiers	16%
Information and Record Clerks, All Other	16%
Transportation Security Screeners	17%
Eligibility Interviewers, Government Programs	18%

³⁰ 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 23. Priority Jobs Represented by Hispanic/Latino in Occupation³¹

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

Occupational Title	Hispanic/ Latino %
Water and Wastewater Treatment Plant and System Operators	29%
Information and Record Clerks, All Other	34%
Detectives and Criminal Investigators	35%
Transportation Security Screeners	36%
Police and Sheriff's Patrol Officers	37%
Correctional Officers and Jailers	41%
Gambling Change Persons and Booth Cashiers	43%
Eligibility Interviewers, Government Programs	44%
Pharmacy Technicians	50%
Licensed Practical and Licensed Vocational Nurses	55%
First-Line Supervisors of Mechanics, Installers, Repairers	55%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	57%
First-Line Supervisors of Office and Administrative Support Workers	57%
Operating Engineers and Other Construction Equipment Operators	57%
First-Line Supervisors of Retail Sales Workers	59%
Power Plant Operators	60%
Production, Planning, and Expediting Clerks	61%
Phlebotomists	64%
Private Detectives and Investigators	64%
Mobile Heavy Equipment Mechanics, Except Engines	64%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	65%
Cooks, Institution and Cafeteria	66%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	67%
First-Line Supervisors of Production and Operating Workers	70%
Industrial Machinery Mechanics	71%
Continuous Mining Machine Operators	72%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	72%
Social and Human Service Assistants	74%
Dental Assistants	75%
Heavy and Tractor-Trailer Truck Drivers	81%
Solar Photovoltaic Installers	83%
Carpenters	84%
Construction Laborers	85%

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.

Exhibit 24. Priority Jobs Represented by White in Occupation³²

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

Occupational Title	White %
Construction Laborers	12%
Carpenters	13%
Social and Human Service Assistants	13%
Solar Photovoltaic Installers	14%
Dental Assistants	15%
Heavy and Tractor-Trailer Truck Drivers	15%
Phlebotomists	19%
Cooks, Institution and Cafeteria	20%
Licensed Practical and Licensed Vocational Nurses	22%
Eligibility Interviewers, Government Programs	22%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	23%
First-Line Supervisors of Production and Operating Workers	23%
Gambling Change Persons and Booth Cashiers	23%
Private Detectives and Investigators	24%
Continuous Mining Machine Operators	24%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	24%
Transportation Security Screeners	25%
Industrial Machinery Mechanics	25%
Pharmacy Technicians	26%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	27%
First-Line Supervisors of Office and Administrative Support Workers	28%
Production, Planning, and Expediting Clerks	29%
First-Line Supervisors of Retail Sales Workers	30%
Mobile Heavy Equipment Mechanics, Except Engines	31%
Correctional Officers and Jailers	33%
Power Plant Operators	33%
First-Line Supervisors of Mechanics, Installers, Repairers	35%
Information and Record Clerks, All Other	35%
Operating Engineers and Other Construction Equipment Operators	38%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	39%
Police and Sheriff's Patrol Officers	41%
Detectives and Criminal Investigators	44%
Water and Wastewater Treatment Plant and System Operators	52%

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.

Exhibit 25. Priority Jobs Represented by Native Hawaiian/Pacific Islander in Occupation³³

Orange cells = significant underrepresentation

Blue cells = significant overrepresentation

Occupational Title	Native Hawaiian/Pacific Islander %
Phlebotomists	0.1%
Private Detectives and Investigators	0.1%
Cooks, Institution and Cafeteria	0.1%
First-Line Supervisors of Retail Sales Workers	0.1%
Mobile Heavy Equipment Mechanics, Except Engines	0.1%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.1%
Industrial Machinery Mechanics	0.1%
First-Line Supervisors of Production and Operating Workers	0.1%
Social and Human Service Assistants	0.2%
Pharmacy Technicians	0.2%
First-Line Supervisors of Mechanics, Installers, Repairers	0.2%
First-Line Supervisors of Office and Administrative Support Workers	0.2%
Operating Engineers and Other Construction Equipment Operators	0.2%
Solar Photovoltaic Installers	0.2%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	0.2%
Heavy and Tractor-Trailer Truck Drivers	0.2%
Licensed Practical and Licensed Vocational Nurses	0.3%
Production, Planning, and Expediting Clerks	0.3%
Detectives and Criminal Investigators	0.3%
Police and Sheriff's Patrol Officers	0.3%
Gambling Change Persons and Booth Cashiers	0.4%
Information and Record Clerks, All Other	0.4%
Power Plant Operators	0.4%
Water and Wastewater Treatment Plant and System Operators	0.5%
Eligibility Interviewers, Government Programs	0.6%
Correctional Officers and Jailers	0.6%
Transportation Security Screeners	3%

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.

Exhibit 26. Priority Jobs Represented by Black/African American in Occupation³⁴

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

Description	Black/African American
Social and Human Service Assistants	6%
Pharmacy Technicians	6%
Licensed Practical and Licensed Vocational Nurses	9%
Dental Assistants	3%
Phlebotomists	6%
Correctional Officers and Jailers	17%
Detectives and Criminal Investigators	9%
Police and Sheriff's Patrol Officers	9%
Private Detectives and Investigators	7%
Transportation Security Screeners	13%
Cooks, Institution and Cafeteria	6%
First-Line Supervisors of Retail Sales Workers	4%
Gambling Change Persons and Booth Cashiers	13%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	5%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	1%
First-Line Supervisors of Office and Administrative Support Workers	5%
Eligibility Interviewers, Government Programs	11%
Information and Record Clerks, All Other	10%
Production, Planning, and Expediting Clerks	3%
Carpenters	1%
Construction Laborers	1%
Operating Engineers and Other Construction Equipment Operators	3%
Solar Photovoltaic Installers	1%
Continuous Mining Machine Operators	2%
First-Line Supervisors of Mechanics, Installers, Repairers	3%
Mobile Heavy Equipment Mechanics, Except Engines	1%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1%
Industrial Machinery Mechanics	1%
First-Line Supervisors of Production and Operating Workers	2%
Power Plant Operators	2%
Water and Wastewater Treatment Plant and System Operators	8%
Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	5%
Heavy & Tractor-Trailer Truck Drivers	2%

³⁴ 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 27. Priority Jobs by Age (55 and Over), 2020³⁵

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

Description	Age Group %						
	14-18	19-21	22-24	25-34	35-44	45-54	55-64
Social and Human Service Assistants	0.2%	1%	3%	21%	24%	24%	20%
Pharmacy Technicians	0.2%	6%	11%	35%	22%	15%	9%
Licensed Practical and Licensed Vocational Nurses	0.1%	2%	3%	24%	25%	23%	19%
Dental Assistants	1%	5%	5%	32%	27%	16%	12%
Phlebotomists	0%	2%	6%	37%	29%	16%	9%
Correctional Officers and Jailers	0.1%	2%	4%	26%	28%	24%	13%
Detectives and Criminal Investigators	0%	0.2%	0.9%	19%	36%	28%	13%
Police and Sheriff's Patrol Officers	0%	0.8%	3%	30%	34%	21%	9%
Private Detectives and Investigators	0%	0.8%	5%	27%	25%	21%	16%
Transportation Security Screeners	0.1%	2%	7%	32%	17%	16%	18%
Cooks, Institution and Cafeteria	1%	3%	5%	19%	23%	24%	18%
First-Line Supervisors of Retail Sales Workers	0.1%	2%	6%	29%	26%	21%	13%
Gambling Change Persons and Booth Cashiers	5%	8%	8%	24%	16%	15%	15%
Sales Reps. of Services, Except Advertising, Insurance, Financial Services, Travel	0.2%	2%	7%	26%	23%	20%	16%
Sales Reps., Wholesale and Manufacturing, Except Technical and Scientific Products	0.1%	0.7%	2%	20%	24%	25%	22%
First-Line Supervisors of Office and Administrative Support Workers	0%	0.5%	2%	18%	26%	27%	22%
Eligibility Interviewers, Government Programs	0%	0.3%	1%	20%	25%	26%	23%
Information and Record Clerks, All Other	0.7%	2%	4%	19%	19%	21%	22%
Production, Planning, and Expediting Clerks	0.1%	1%	3%	22%	24%	26%	20%
Carpenters	0.4%	2%	5%	24%	23%	27%	15%
Construction Laborers	1%	3%	6%	25%	25%	24%	13%
Operating Engineers and Other Construction Equipment Operators	0.1%	1%	2%	17%	23%	28%	22%
Solar Photovoltaic Installers	0.1%	2%	5%	27%	27%	22%	15%
Continuous Mining Machine Operators	0%	0.7%	3%	26%	35%	20%	14%

³⁵ 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.

Description	Age Group %						
	14-18	19-21	22-24	25-34	35-44	45-54	55-64
First-Line Supervisors of Mechanics, Installers, Repairers	0%	0.2%	1%	13%	25%	30%	26%
Mobile Heavy Equipment Mechanics, Except Engines	0.1%	1%	3%	20%	26%	25%	21%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	0.1%	0.9%	3%	22%	27%	27%	16%
Industrial Machinery Mechanics	0%	0.9%	3%	18%	25%	28%	22%
First-Line Supervisors of Production and Operating Workers	0%	0.2%	1%	16%	27%	30%	22%
Power Plant Operators	0%	0%	1%	18%	29%	28%	21%
Water and Wastewater Treatment Plant and System Operators	0%	0.6%	2%	17%	23%	28%	26%
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	0%	0.5%	2%	18%	26%	27%	22%
Heavy and Tractor-Trailer Truck Drivers	0.1%	0.7%	2%	15%	22%	27%	24%

Exhibit 28. Priority Programs (TOP Codes) Enrollment by Females, 2016-2017³⁶

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

TOP Code	Program Name	Female %
0112.00	Agriculture Business, Sales and Service	N/A
0506.30	Management Development and Supervision	60%
0514.00	Office Technology/Office Computer Applications	77%
0934.00	Electronics and Electric Technology	N/A
0946.00	Environmental Control Technology	N/A
0948.00	Automotive Technology	8%
0958.00	Water and Wastewater Technology	N/A
1221.00	Pharmacy Technology	76%
1230.20	Licensed Vocational Nursing	78%
2105.00	Administration of Justice	43%
2105.10	Corrections	44%
2105.50	Police Academy	26%

Exhibit 29. Priority Programs (TOP Codes) Enrollment by Males, 2016-2017

Orange cells = significant underrepresentation
Blue cells = significant overrepresentation

TOP Code	Program Name	Male %
0112.00	Agriculture Business, Sales and Service	
0506.30	Management Development and Supervision	37%
0514.00	Office Technology/Office Computer Applications	22%
0934.00	Electronics and Electric Technology	
0946.00	Environmental Control Technology	
0948.00	Automotive Technology	91%
0958.00	Water and Wastewater Technology	
1230.20	Licensed Vocational Nursing	
2105.00	Administration of Justice	57%
2105.10	Corrections	55%
2105.50	Police Academy	74%

³⁶ 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 30. Priority Programs (TOP Codes) Enrollment by Age, 2016-2017³⁷

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

TOP Code	Program Name	Students Enrolled	Age Group %					
			19 and younger	20-24	25-29	30-34	35-39	40 and older
0112.00	Agriculture Business, Sales and Service	28	N/A	N/A	N/A	N/A	N/A	N/A
0506.30	Management Development and Supervision	30	N/A	N/A	N/A	N/A	N/A	N/A
0514.00	Office Technology/Office Computer Applications	290	6%	34%	13%	11%	12%	12%
0934.00	Electronics and Electric Technology	125	11%	18%	19%	20%	N/A	N/A
0946.00	Environmental Control Technology	75	N/A	25%	N/A	N/A	N/A	N/A
0948.00	Automotive Technology	152	25%	43%	8%	9%	N/A	N/A
0958.00	Water and Wastewater Technology	84	N/A	36%	25%	N/A	N/A	N/A
1230.20	Licensed Vocational Nursing	23	N/A		52%	N/A	N/A	N/A
2105.00	Administration of Justice	1,042	37%	47%	8%	3%	N/A	N/A
2105.10	Corrections	213	18%	54%	15%	N/A	N/A	N/A
2105.50	Police Academy	85	N/A	47%	19%	13%	N/A	N/A

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

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

TOP Code	Program Name	Hispanic %
0112.00	Agriculture Business, Sales and Service	82%
0506.30	Management Development and Supervision	N/A
0514.00	Office Technology/Office Computer Applications	92%
0934.00	Electronics and Electric Technology	91%
0946.00	Environmental Control Technology	85%
0948.00	Automotive Technology	90%
0958.00	Water and Wastewater Technology	93%
1230.20	Licensed Vocational Nursing	87%
2105.00	Administration of Justice	93%
2105.10	Corrections	88%
2105.50	Police Academy	N/A

Exhibit 32. Priority Programs (TOP Codes) Enrollment by White, 2016-2017³⁸

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

TOP Code	Program Name	White %
0112.00	Agriculture Business, Sales and Service	N/A
0506.30	Management Development and Supervision	N/A
0514.00	Office Technology/Office Computer Applications	5%
0934.00	Electronics and Electric Technology	N/A
0946.00	Environmental Control Technology	N/A
0948.00	Automotive Technology	N/A
0958.00	Water and Wastewater Technology	N/A
1230.20	Licensed Vocational Nursing	N/A
2105.00	Administration of Justice	3%
2105.10	Corrections	N/A
2105.50	Police Academy	N/A

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 33. Priority Programs (TOP Codes) Enrollment by Black/African American, 2016-2017³⁹

Orange cells = significant underrepresentation
 Blue cells = significant overrepresentation

TOP Code	Program Name	Black / African American %
0112.00	Agriculture Business, Sales and Service	N/A
0506.30	Management Development and Supervision	N/A
0514.00	Office Technology/Office Computer Applications	N/A
0934.00	Electronics and Electric Technology	N/A
0946.00	Environmental Control Technology	N/A
0948.00	Automotive Technology	N/A
0958.00	Water and Wastewater Technology	N/A
1230.20	Licensed Vocational Nursing	N/A
2105.00	Administration of Justice	2%
2105.10	Corrections	8%
2105.50	Police Academy	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.

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.⁴⁰

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.⁴¹ 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 Imperial County was \$15.24 per hour.⁴²

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 Imperial County; and has at least 10 projected annual job openings in Imperial 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.⁴³ Not everyone who is of working age is working or seeking work. Many people, for example, are full-time students, caregivers, disabled or retired.

⁴⁰ 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](https://www.bls.gov/soc)

⁴¹ 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).

⁴² Family Needs Calculator (formerly the California Family Needs Calculator),” Insight: Center for Community Economic Development, last updated 2021. insightccd.org/family-needs-calculator/.

⁴³ “Labor Force Statistics Glossary,” U.S. Census Bureau, [census.gov/topics/employment/labor-force/about/glossary.html](https://www.census.gov/topics/employment/labor-force/about/glossary.html)

Data

The San Diego Workforce Partnership provided the following narrative for the methodology of this study.

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.⁴⁴ Second, information on student enrollment was obtained from the California Community Colleges Chancellor's Office data system – LaunchBoard⁴⁵ – 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”).⁴⁶ 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 Imperial 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.⁴⁷ 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, 2021.⁴⁸

Procedures

First, we identified Imperial 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 Imperial County; and had at least 10 projected annual job openings in Imperial County between 2022 and 2027.

⁴⁴ Lightcast (formerly EMSI); QCEW, Non-QCEW, Self-Employed. SDWP pulled the labor market occupational data on January 6, 2022.

⁴⁵ “LaunchBoard,” California Community Colleges, launchboard-resources.wested.org/resources/65calpassplus.org/LaunchBoard/SWP.aspx

⁴⁶ “LaunchBoard FAQ (p.3),” California Community Colleges, launchboard-resources.wested.org/resources/65

⁴⁷ “ACS PUMS Files: The Basics,” U.S. Census Bureau, census.gov/content/dam/Census/library/publications/2021/acs/acs_pums_handbook_2021_ch01.pdf

⁴⁸ 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.ccstechcenter.org/programs

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.⁴⁹ To obtain information on Imperial County specifically, we identified TOP codes with existing programs at Imperial Valley College and at least one Imperial County community college; for each program identified, we then subtracted Imperial Valley College counts from the Imperial-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 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.⁵⁰ Those shaded in the darker orange are indicative of high underrepresentation, with less than half the percentage in the group

⁴⁹ "LaunchBoard FAQ (p.3)," California Community Colleges, launchboard-resources.wested.org/resources/65

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).⁵¹ 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 Imperial 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).

⁵¹ 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.