

# Labor Market Analysis for: 1221.00 Pharmacy Technology

Inland Empire/Desert Center of Excellence, September 2024

Prepared by: Chris Cruzcosa, ccruzcosa@iegocollaborative.org



## Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	✓	<input type="checkbox"/>	<input type="checkbox"/>

Program LMI Endorsement Criteria		
Supply Gap	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> There is <i>projected</i> to be <b>514 annual job openings</b> throughout the Inland Empire/Desert region, which is more than the <b>282 annual average awards conferred by educational institutions over the last 3 years</b> . Supply data includes both community college awards (31) and non-community college awards (251).	
Living Wage	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> <b>All (100%) of annual job openings</b> for this occupation <b>have entry-level hourly wages above the IE/D living wage of 13.74.<sup>1</sup></b>	
Education	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> <b>Most job postings for target occupations require a high school diploma or equivalent (82%)</b> . See exhibits 8 and 9 for more details.	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor’s degree)
  - Pharmacy Technician (29-2052)

## Summary of findings

### Demand

- The number of jobs related to the middle-skill occupation above is projected to increase 10% through 2028, with 514 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25<sup>th</sup> percentile hourly wage, estimated to be \$21.97 in IE/D.
- There were 1,090 online job postings from 184 employers over the past 12-months with the highest postings for “pharmacy technicians”.
- Most job postings for target occupations require a high school diploma or equivalent (82%), followed by bachelor’s degree (16%), and associate degree (2%).

### Supply

- On average, there were 282 annual awards conferred by educational institutions over the last 3 years in related fields: 31 from community colleges and 251 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2021-22 academic year earned a median annual wage of \$30,832 (\$14.82 per hour).
- 75% of students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.
- Community college programs play an important role diversifying the talent pipeline in these occupations. The plurality of IE/D professionals in pharmacy technology occupations are Hispanic/Latino (46%), “mid-career” age category (38%), and female (78%). Most community college students in related programs are Hispanic/Latino (71%), “pre-career/college” age category (54%), and female (84%).

<sup>1</sup> While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. For these reasons, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

## Introduction

California Community College Pharmacy Technology (TOP 1221.00) programs prepare students for employment using the principles and procedures used to assist in maintaining and dispensing pharmaceutical supplies and medications (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Pharmacy Technology programs lead to employment in occupations related to pharmacy technology.

## Job Demand

In 2023, there were 4,592 jobs in occupations related to pharmacy technology in the IE/D region. Regional employment for this occupation group is projected to increase by 10% through 2028 with 514 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

**Exhibit 1. Five-year projections for occupations related to pharmacy technology, IE/D Region, 2023-2028**

Occupation	SOC	2023 Jobs	2028 Jobs	2023 - 2028 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Pharmacy Technicians	29-2052	4,592	5,034	10%	2,571	514

SOURCE: LIGHTCAST 2024.2

## Job Postings

The following analysis for occupations related to pharmacy technology using online job posting data.

**Important note:** The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.<sup>2</sup> While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to pharmacy technology over the last 12 months and the median posting duration. Over the previous 12 months, there were 1090 unique job postings for occupations related to pharmacy technology in the region from 184 employers.

**Exhibit 2. Job ads and posting duration, IE/D Region, Aug 2023 – Jul 2024**

Job Title	Job Ads	Median Posting Duration
Pharmacy Technicians	1,090	28 days

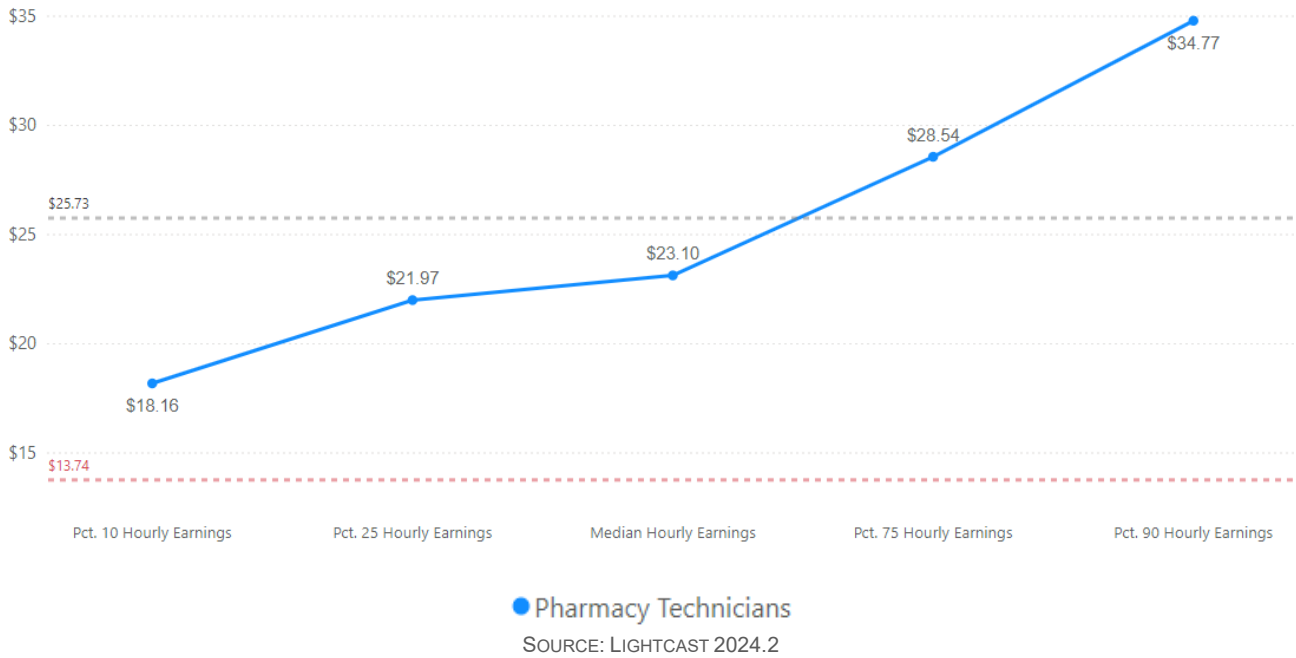
SOURCE: LIGHTCAST 2024.2

<sup>2</sup> "Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, <https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology>

# Earnings

Exhibit 3a displays the hourly earnings for occupations related to medical imaging and Exhibit 3b displays the hourly earnings for job postings of the same occupations and compares both to the UW Self-Sufficiency Standard for the IE/D<sup>3</sup> and the MIT IE/D living wage of \$25.73.<sup>4</sup> The living wage criteria is determined using the data in exhibit 3a but Exhibit 3b is also shown to provide regional context using job posting data.

**Exhibit 3a. Projected hourly earnings by percentile, IE/D Region, 2023**



**Exhibit 3b. Hourly earnings of job postings by percentile, IE/D Region, 2023**



All projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) were above the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3a). However, the occupation listed was below the MIT living wage for an adult with no children (\$25.73) in projected wages (see Exhibit 3a).

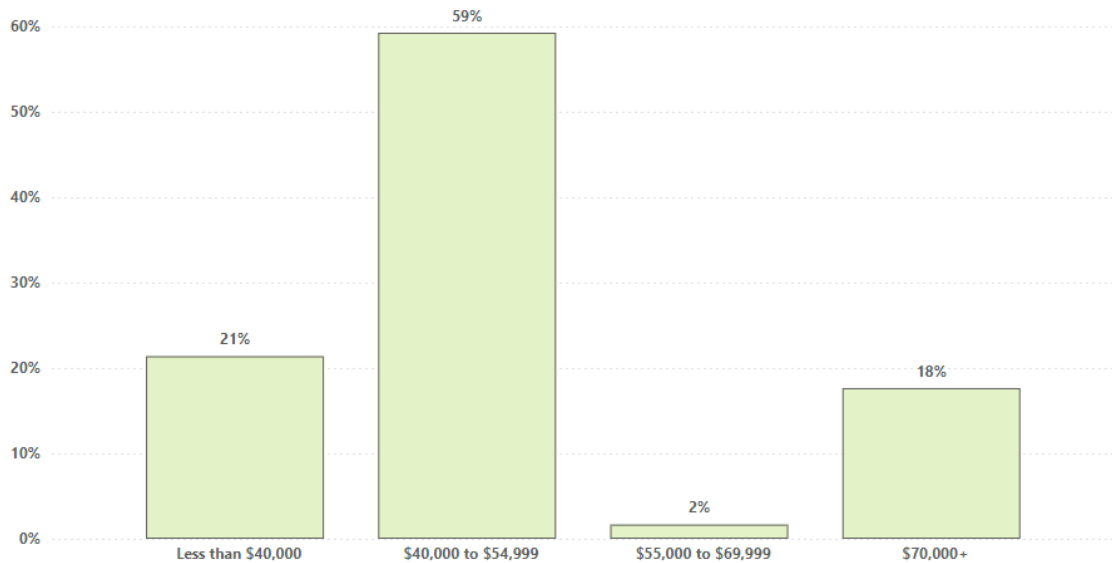
<sup>3</sup> While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. While the COE uses this standard for the LMI Wage criteria. For these reasons, this report provides an alternative living wage calculation from MIT in the analysis as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

<sup>4</sup> *ibid.*

## Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to pharmacy technology over the last 12 months. Online job ad salary information data suggests most employers (59%) advertise an annual salary between \$40,000 and \$54,999 (\$19.23 - \$26.44 per hour).

**Exhibit 4. Online advertised salaries occupations related to pharmacy technology, IE/D Region, Aug 2023 – Jul 2024**



SOURCE: LIGHTCAST 2024.2

## Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to pharmacy technology over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

**Exhibit 5. Job titles most frequently used in job ads, IE/D Region, Aug 2023 – Jul 2024**

Job Title	Unique Postings
Pharmacy Technicians	781
Certified Pharmacy Technicians	91
Pharmacy Clerks	32
Pharmacy Technicians-in-Training	27
Pharmacy Service Associates	21
Outpatient Pharmacy Technicians	18
Pharmacy Clerks/Technicians	17
Order Entry Pharmacy Technicians	14
Inpatient Pharmacy Technicians	11
Lead Pharmacy Technicians	9

SOURCE: LIGHTCAST 2024.2

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. Walgreens Boots Alliance and CVS Health had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are deduplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast’s Job Posting Analytics dashboard.

**Exhibit 6. Employers posting the most job ads, IE/D Region, Aug 2023 – Jul 2024**

Company	Total/Unique (Aug 2023 - Jul 2024)	Posting Intensity	Median Posting Duration
Walgreens Boots Alliance	1,238 / 178	7 : 1	28 days
CVS Health	1,517 / 174	9 : 1	31 days
Walmart	160 / 89	2 : 1	29 days
Rite Aid	226 / 49	5 : 1	29 days
Loma Linda University Health	276 / 33	8 : 1	18 days
Kaiser Permanente	109 / 31	4 : 1	33 days
Safeway	33 / 24	1 : 1	n/a
Target	59 / 20	3 : 1	39 days
Citrus Pharmacy	96 / 17	6 : 1	34 days
Cps Solutions	60 / 15	4 : 1	29 days

SOURCE: LIGHTCAST 2024.2

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today’s demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole.<sup>5</sup>

<sup>5</sup> “What are Lightcast Skill Projects”, Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

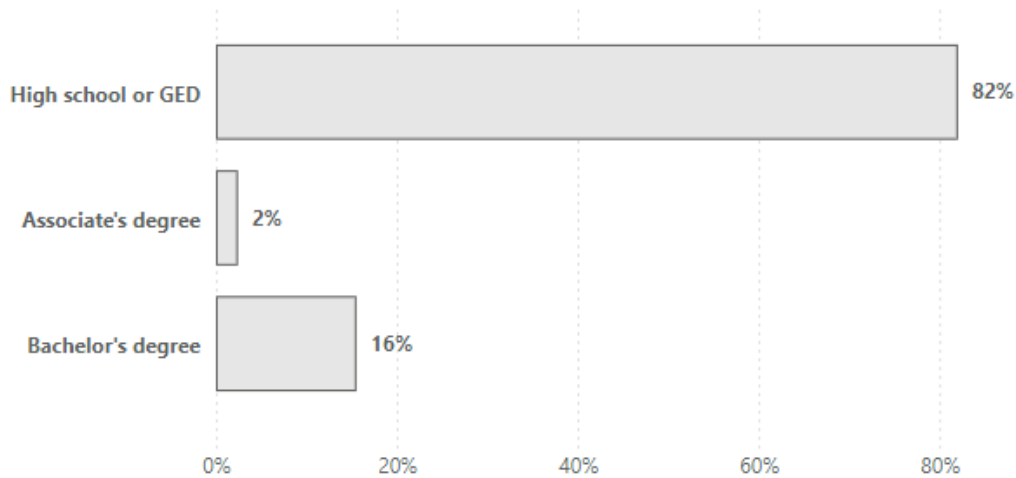
**Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Region, Aug 2023 – Jul 2024**

Common skills	Total Postings	Skill Growth Relative to Market
Customer Service	560	Stable
Mathematics	382	Rapidly Growing
Communication	343	Lagging
English Language	299	Growing
Packaging And Labeling	261	Growing
Operations	242	Stable
Typing	231	Stable
Ethical Standards And Conduct	220	Growing
Sales	214	Stable
Computer Literacy	213	Lagging
Specialized skills	Total Postings	Skill Growth Relative to Market
Medical Prescription	739	Growing
Pharmacist Assistance	320	Growing
Pharmaceuticals	294	Rapidly Growing
Pharmacy Experience	285	Stable
Inventory Management	259	Growing
Medication Dispensation	235	Growing
Cash Register	229	Rapidly Growing
Inventory Control	218	Growing
Merchandising	208	Growing
Medical Privacy	195	Growing
Computer Skills	Total Postings	Skill Growth Relative to Market
Pyxis MedStation (Medication Dispensing Software)	37	Growing
Microsoft Excel	27	Growing
Epic EMR	21	Growing
Microsoft Word	19	Stable
Microsoft Office	18	Growing
Microsoft PowerPoint	15	Rapidly Growing
Microsoft Outlook	10	Rapidly Growing
Software Systems	8	Growing
Spreadsheets	8	Rapidly Growing
PrimeRx (Pharmacy Management Software)	6	Stable

SOURCE: LIGHTCAST 2024.2

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with high school diploma or equivalent (82%) significantly greater than associate degree (2%) or bachelor's degree (16%).

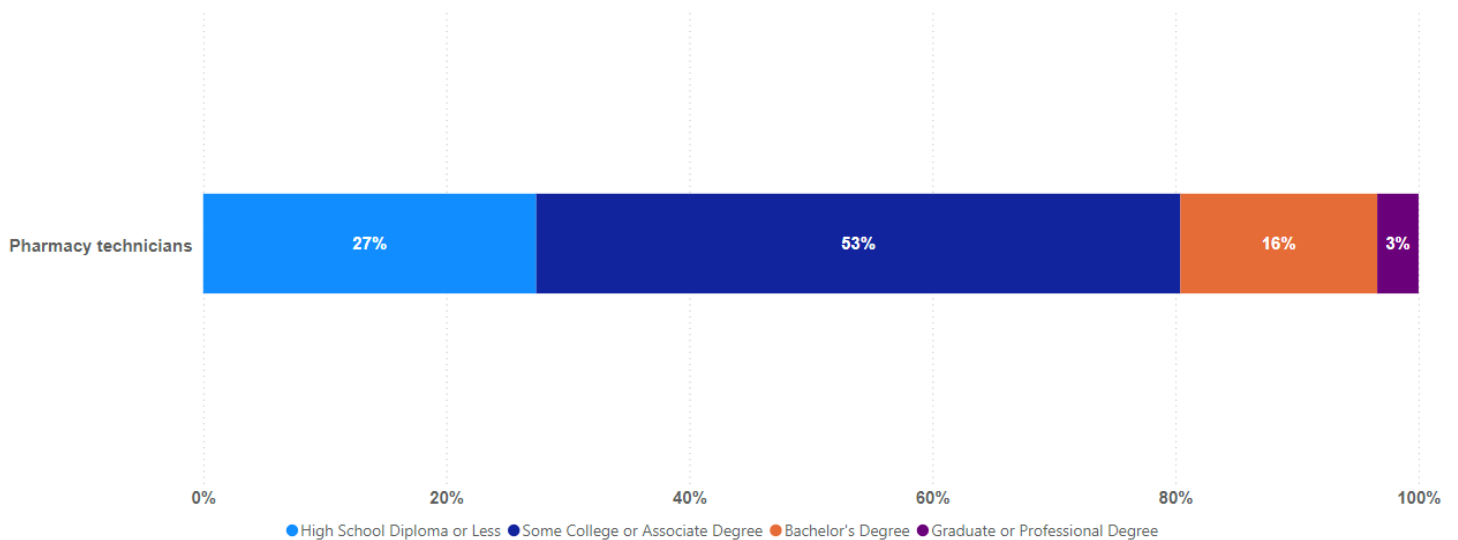
**Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Aug 2023 – Jul 2024**



SOURCE: LIGHTCAST 2024.2

For the middle-skill occupation, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that an estimated 34% of workers have completed some college or an associate degree as their highest level of education.

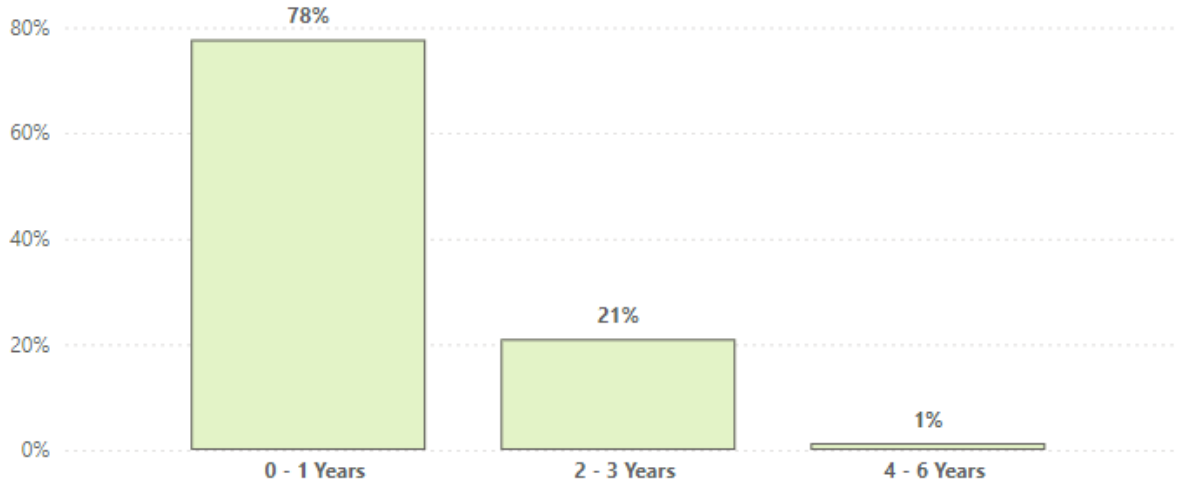
**Exhibit 9 National-level Education Attainment for Occupations**



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The majority (78%) of employers listing minimum experience requirements sought candidates with 0-1 years of previous work experience.

**Exhibit 10 Work experience requirements,  
IE/D Region, Aug 2023 – Jul 2024**



SOURCE: LIGHTCAST 2024.2



## Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Pharmacy Technology (TOP 1221.00) programs over the last three academic years (2020-2023). In the previous three academic years, three regional community colleges issued an average of 31 awards in relevant programs.

**Exhibit 11 Annual average community college awards for Pharmacy Technology (TOP 1221.00)**

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
1221.00	Pharmacy Technology	San Bernardino	11	39	26	25
1221.00	Pharmacy Technology	College Of the Desert	0	1	14	5
1221.00	Pharmacy Technology	Chaffey	0	0	1	0
<b>Total</b>			<b>11</b>	<b>40</b>	<b>41</b>	<b>31</b>

SOURCE: MIS DATA MART

### Non-Community College Supply

Award completion data is available for Pharmacy Technician/Assistant (CIP 51.0805) in the IE/D for non-community college programs.

In the previous three academic years, 12 regional non-community colleges institutions issued an average of 251 awards in relevant programs.

CIP	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
51.0805	Pharmacy Technician/Assistant	American Career College-Ontario	36	44	60	47
51.0805	Pharmacy Technician/Assistant	American College of Healthcare and Technology	10	10	13	11
51.0805	Pharmacy Technician/Assistant	California Nurses Educational Institute	0	1	1	1
51.0805	Pharmacy Technician/Assistant	North-West College-Riverside	22	45	33	33
51.0805	Pharmacy Technician/Assistant	Platt College-Ontario	0	0	0	0
51.0805	Pharmacy Technician/Assistant	Platt College-Riverside	0	0	0	0
51.0805	Pharmacy Technician/Assistant	Riverside County Office of Education-School of Career Education	39	48	26	38
51.0805	Pharmacy Technician/Assistant	San Joaquin Valley College-Hesperia	27	18	30	25
51.0805	Pharmacy Technician/Assistant	San Joaquin Valley College-Ontario	15	17	23	18
51.0805	Pharmacy Technician/Assistant	San Joaquin Valley College-Rancho Mirage	0	7	13	7
51.0805	Pharmacy Technician/Assistant	San Joaquin Valley College-Temecula	25	25	29	26
51.0805	Pharmacy Technician/Assistant	UEI College-Riverside	52	39	45	45
<b>Total</b>			<b>226</b>	<b>254</b>	<b>273</b>	<b>251</b>

SOURCE: IPEDS

## Strong Workforce Program Outcomes

California program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12.

### *Exhibit 12 Pharmacy Technology strong workforce program outcomes, IE/D, most recent academic year*

<b>Program metric title</b>	<b>Inland Empire/Desert</b>	<b>Statewide</b>
Attained a living wage (completers and skills-builders)	54%	42%
Completed 9+ career education units in one year	20%	27%
Job closely related to the field of study	75%	69%
Median annual earnings (all exiters)	\$30,832	\$35,916
Students who attained a noncredit workforce milestone in a year	92%	72%
Students who earned a degree, certificate, or attained apprenticeship	25	160
Unduplicated count of enrolled students	445	1,380

SOURCE: LAUNCHBOARD

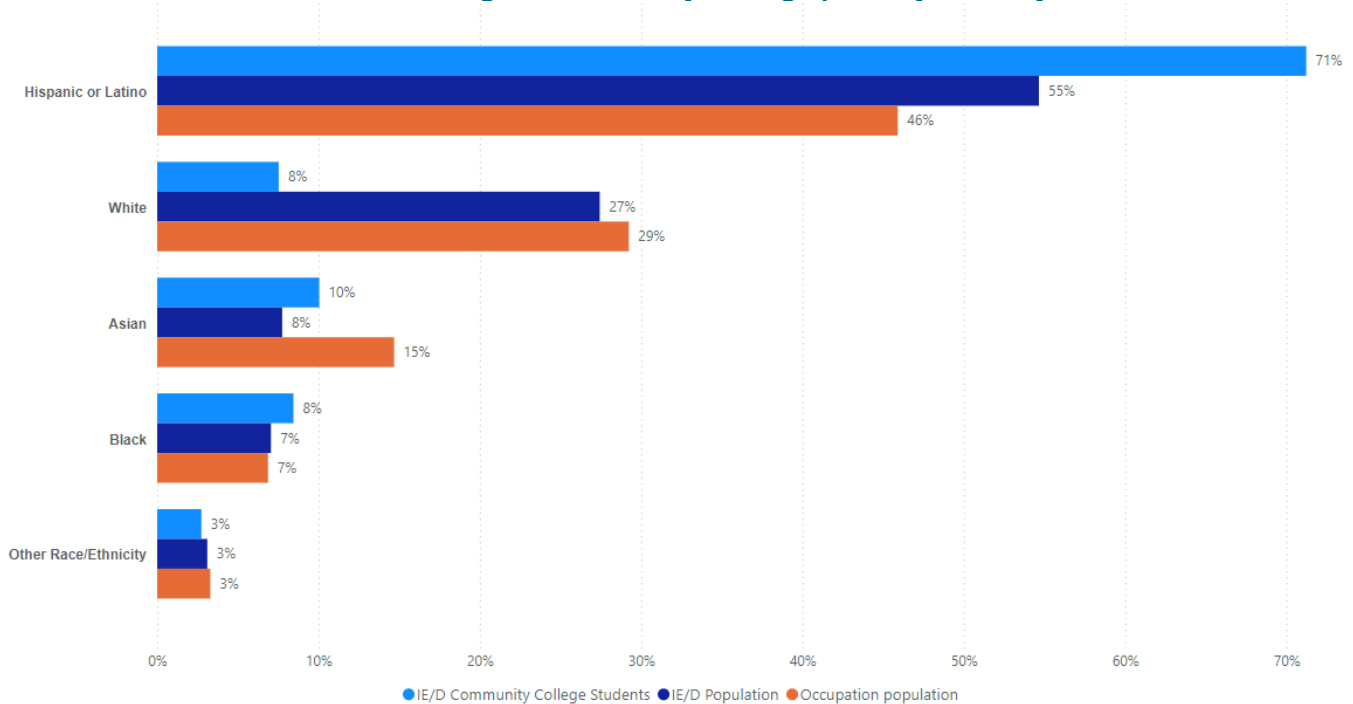
# Building an Inclusive Economy

This section examines demographic data for IE/D community college students in Pharmacy Technology programs compared to the IE/D population. We also include demographics for related occupation data for the occupation related to pharmacy technology. This analysis can be used to:

- Understand the community college system’s current or potential role supporting a diverse talent pipeline into the occupations of interest.
- Inform students (and the faculty and staff working with them) the extent to which individuals from similar demographic groups are over or underrepresented in the professions related to their field of study.
- Inform employers of the diverse talent pipeline coming from the community college system for the occupations analyzed.

Notably, 71% of students enrolled in Pharmacy Technology programs are Hispanic/Latino, which is significantly higher than Hispanic/Latino workers in occupations related to pharmacy technology in the IE/D region (46%). Additionally, 29% of the IE/D population that are employed in occupations related to pharmacy technology are White, which is significantly higher than the IE/D community college students (8%) and slightly higher than the IE/D population (27%). Though 15% of the workers employed in occupations related to pharmacy technology are Asian, only 10% of students in Pharmacy Technology programs and 8% of the IE/D population are Asian.

**Exhibit 13 Program and County Demographics by Ethnicity**



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

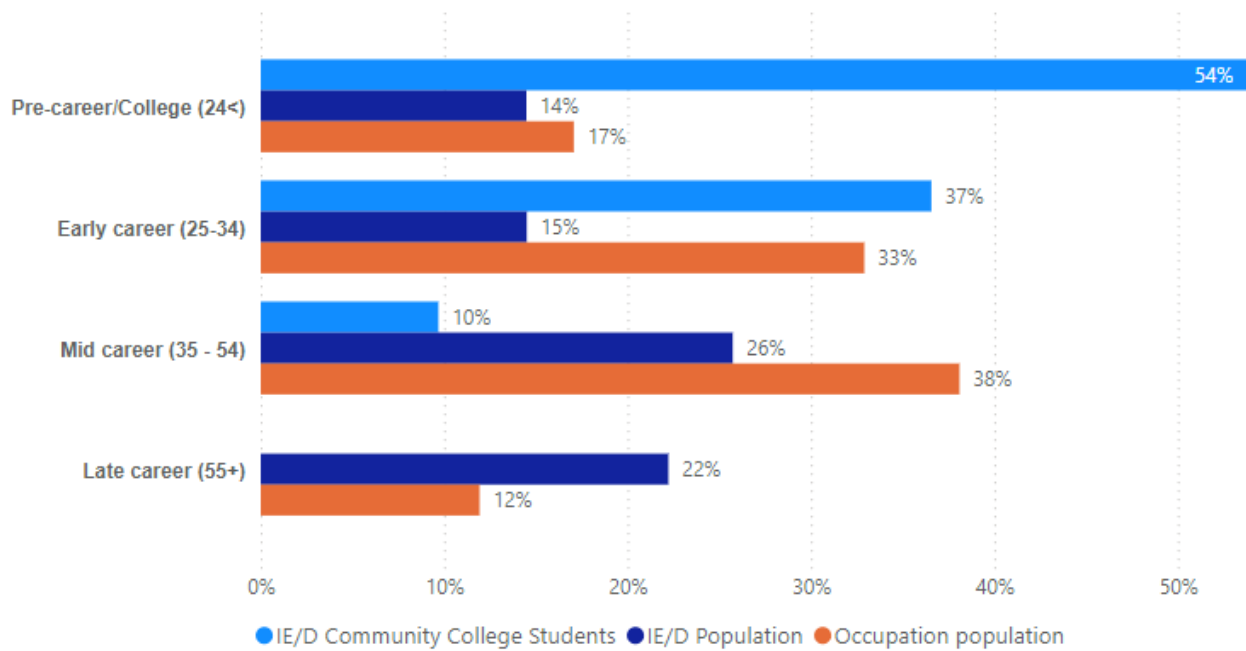
Most IE/D professionals in pharmacy technology occupations are Hispanic/Latino (46%), “mid career” age category (38%), and female (78%). Most community college students in related programs are Hispanic/Latino (71%), “pre-career/college” age category (54%), and female (84%). Major takeaways:

- Community colleges are an important talent source for employers committed to greater racial/ethnic diversity, especially Hispanic/Latino professionals.
- College programs may want to consider strategies to engage more men into these programs.

Exhibit 14 compares the age of IE/D community college students enrolled in Pharmacy Technology programs compared to the IE/D population.

The majority of students enrolled in Pharmacy Technology programs are in the “pre-career/college” category (54%) as compared to IE/D population (14%) and workforce (17%) in this occupation related to pharmacy technology. These programs are an important entry point for young pharmacy technology professionals.

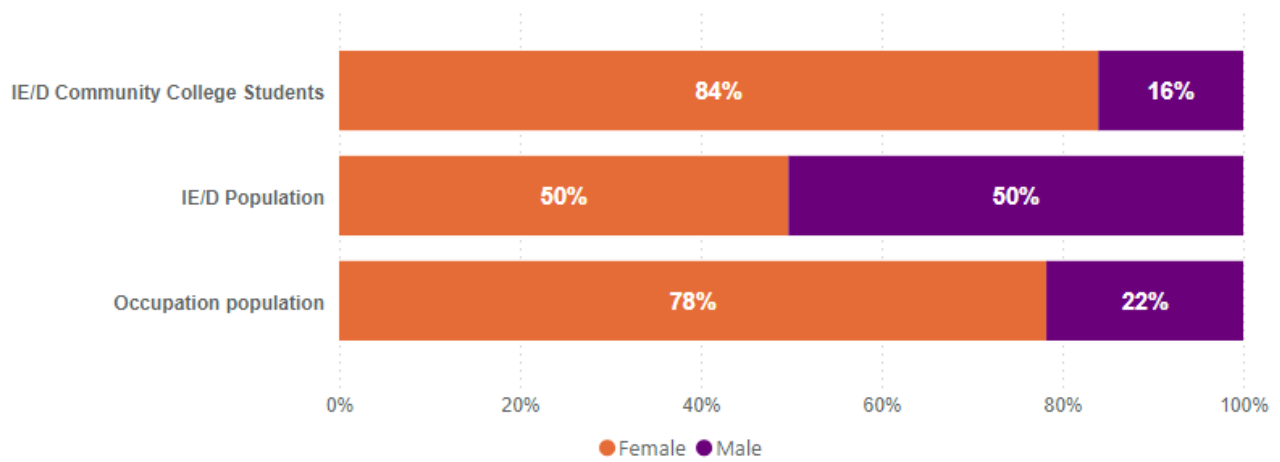
**Exhibit 14 Program and County Demographics by Age**



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Exhibit 15 compares the gender of IE/D County community college students enrolled in Pharmacy Technology programs compared to the IE/D population. We also include demographics for related occupation data for the occupation related to pharmacy technology to identify potential diversity and equity issues addressable by community college programs.

**Exhibit 15 Program and County Demographics by Gender**



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

## Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2020 and 2023 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2023a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS) administered by Santa Rosa Junior College (LaunchBoard, 2023a).

## Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment. <a href="https://lightcast.io/">https://lightcast.io/</a>
Living Wage	The living wage is derived from MITs Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: <a href="https://livingwage.mit.edu/pages/methodology">https://livingwage.mit.edu/pages/methodology</a> The living wage for one adult in San Bernardino County is \$25.17 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$26.30 per hour (\$54,704 annually). The average living wage to represent Inland Empire/Desert is \$25.74 per hour (53,539.20 annually)
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see <a href="https://www.bls.gov/emp/documentation/education/tech.htm">https://www.bls.gov/emp/documentation/education/tech.htm</a>
Educational Supply	The CCCC Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: <a href="https://datamart.cccco.edu">https://datamart.cccco.edu</a> The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see <a href="https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions">https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions</a>
Student Metrics and Demographics	LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: <a href="https://www.calpassplus.org/LaunchBoard/Home.aspx">https://www.calpassplus.org/LaunchBoard/Home.aspx</a>