



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 2,217 annual job openings throughout the Inland Empire/Desert region, which is more than the 55 annual average awards conferred by educational institutions over the last 3 years . Supply data includes both community college awards (53) and non-community college awards (2).	
Living Wage	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> All (100%) of annual job openings for these five occupations have entry-level hourly wages above the IE/D living wage of \$13.74. ¹	
Education	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> Most job postings for target occupations require a high school or equivalent degree (50%). 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)
 - Transportation, Storage, and Distribution Managers (11-3071)
 - Production, Planning, and Expediting Clerks (43-5061)
 - First-Line Supervisors of Production and Operating Workers (51-1011)
 - Material Moving Workers, All Other (53-7199)
- Above Middle-Skill (typically require a bachelor’s degree)
 - Logisticians (13-1081)

Summary of findings

Demand

- The number of jobs related to the middle-skill occupations – Transportation, Storage, and Distribution Managers, Production, Planning, and Expediting Clerks, First-Line Supervisors of Production and Operating Workers, Material Moving Workers, All Other - is projected to increase 11% through 2027, with 1,925 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25th percentile hourly wage ranging from \$16.74 to \$36.44 in IE/D.
- There were 5,037 online job postings from 1,669 employers over the past 12-months with the highest postings for transportation, storage, and distribution managers.
- Most job postings for target occupations require high school or equivalent degree (50%), followed by bachelor’s degree (43%), and associate degree (7%).

Supply

- On average, there were 55 annual awards conferred by educational institutions over the last 3 years in related fields: 53 from community colleges and 2 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 \$66,214 (\$31.84 per hour).
- 57% 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. Most IE/D professionals in logistics management occupations are Hispanic/Latino or White (82%), “mid-career” or “late career” age categories (71%), and male (63%). Most community college students in related programs are Hispanic/Latino (55%), “pre-career/college” or “early career” age categories (68%), and male (60%).

¹ 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 Bernardino County.

Introduction

California Community College Logistics and Materials Transportation (TOP 0510.00) programs prepare students for employment using theory, principles, functions, and procedures for the orderly and economic receiving, manufacturing, shipping, and servicing of products or services. (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Logistics and Materials Transportation programs lead to employment in occupations related to logistics management.

Job Demand

In 2022, there were 18,425 jobs in occupations related to logistics management in the IE/D region. Regional employment for this occupation group is projected to increase by 11% through 2027 with 2,217 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 logistics management, IE/D Region, 2022-2027

Occupation	SOC	2022 Jobs	2027 Jobs	2022 - 2027 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Production, Planning, and Expediting Clerks	43-5061	5,204	5,363	3%	3034	607
Transportation, Storage, and Distribution Managers	11-3071	4,343	5,332	23%	2881	576
First-Line Supervisors of Production and Operating Workers	51-1011	5,145	5,382	5%	2703	541
Logisticians	13-1081	2,092	2,621	25%	1458	292
Material Moving Workers, All Other	53-7199	1,641	1,613	-2%	1003	201
Total		18,425	20,311	11%	11079	2,217

SOURCE: LIGHTCAST 2024.1

Job Postings

The following analysis for occupations related to logistics management 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.² 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 logistics management over the last 12 months and the median posting duration. Over the previous 12 months, there were 5,037 unique job postings for occupations related to logistics management in the region from 1,669 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, May 2023 – April 2024

Job Title	Job Ads	Median Posting Duration
Transportation, Storage, and Distribution Managers	2,003	28 days
First-Line Supervisors of Production and Operating Workers	1,153	30 days
Production, Planning, and Expediting Clerks	1,055	29 days
Logisticians	826	27 days
Total	5,037	

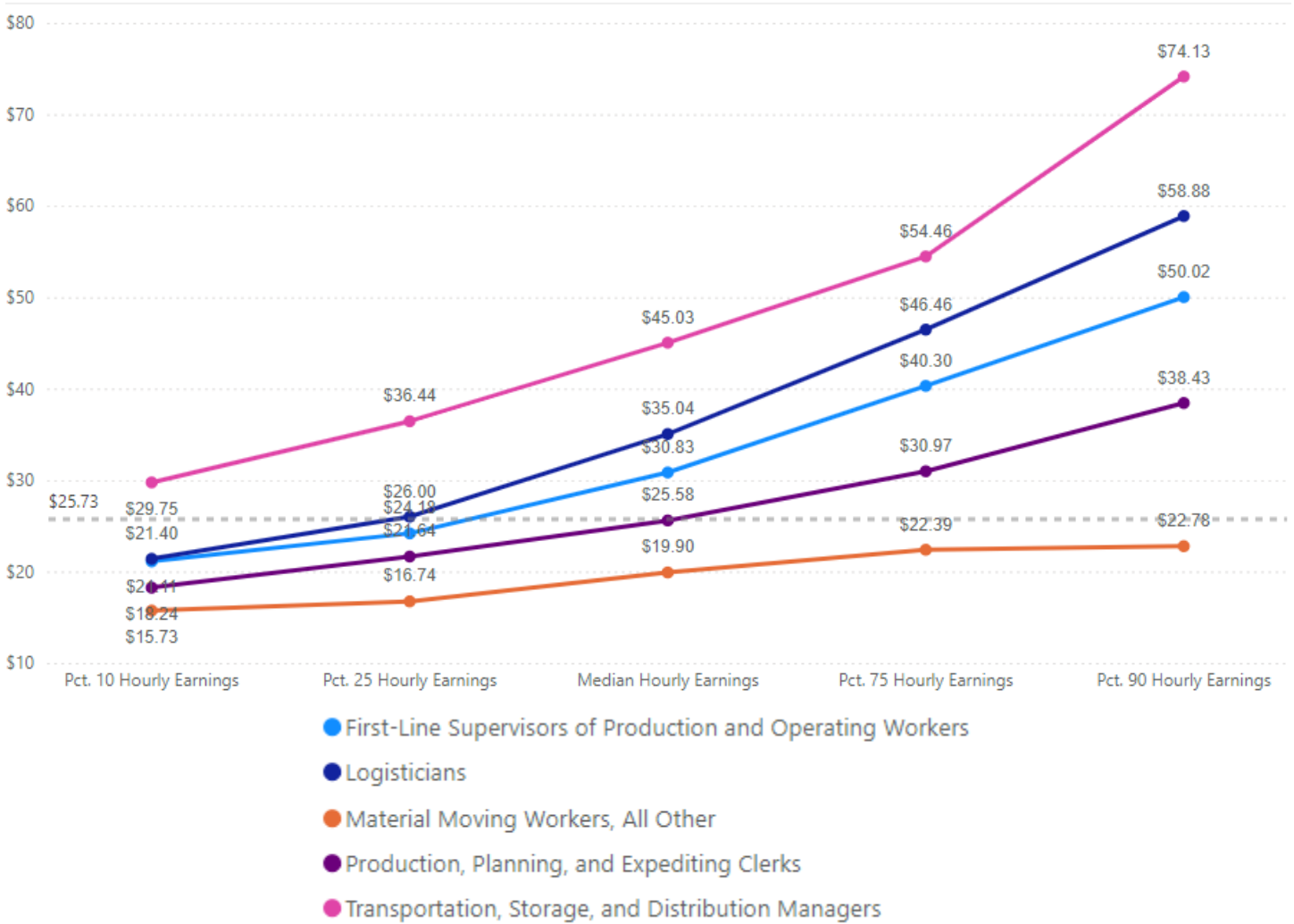
SOURCE: LIGHTCAST 2024.1

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

Earnings

Exhibit 3 displays the hourly earnings for occupations related to logistics management and includes comparison of hourly earnings as compared to the MIT IE/D living wage of \$25.73.³

Exhibit 3. Hourly earnings by percentile for occupations related to logistics management, IE/D Region, 2022



SOURCE: LIGHTCAST 2024.1

All 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/D⁴. Two of the five occupations we also above the MIT living wage for an adult with no children (\$25.73).

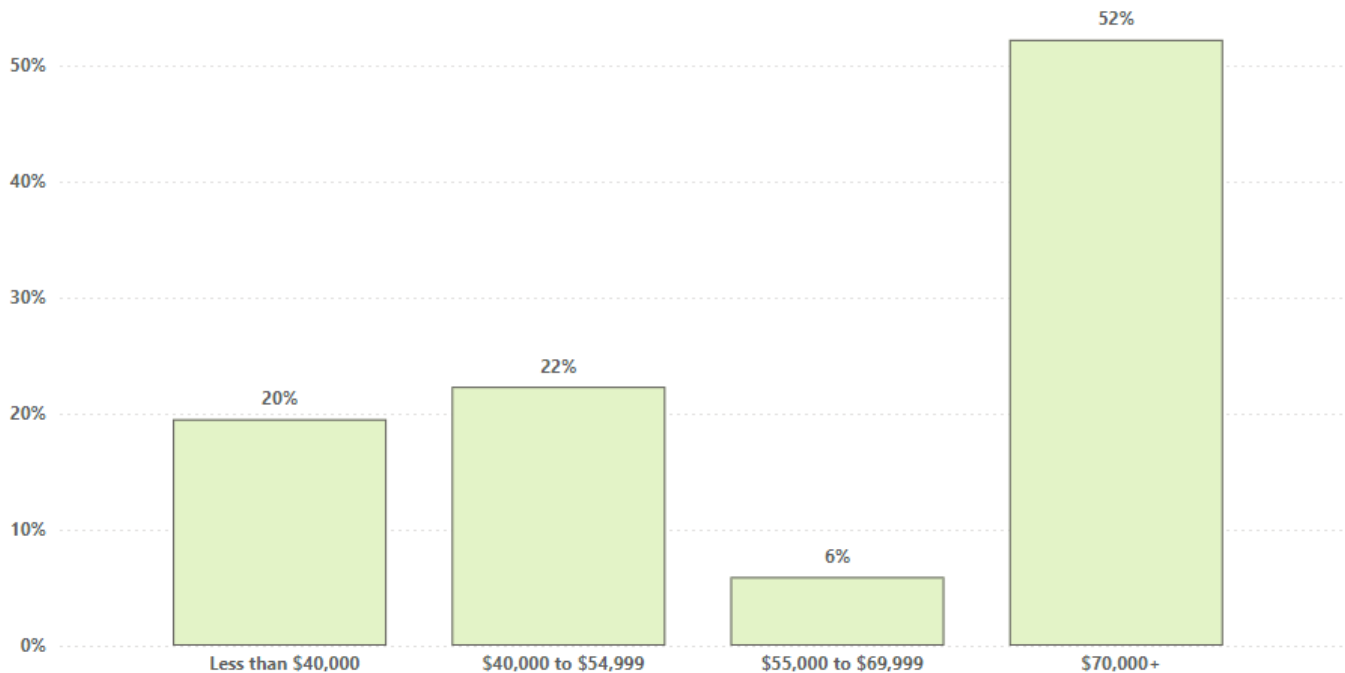
³ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. While the COE uses this standard for the LMI Wage criteria, For these reasons, the 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.

⁴ *ibid*

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to logistics management over the last 12 months. Online job ad salary information data suggests most employers (52%) advertise an annual salary greater than \$70,000 (\$33.65 per hour).

Exhibit 4. Online advertised salaries occupations related to logistics management, IE/D Region, May '23 to April '24



SOURCE: LIGHTCAST 2024.1

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 logistics management 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 May '23 to April '24

Job Title	Unique Postings
Production Supervisors	197
Warehouse Managers	180
Logistics Coordinators	84
Schedulers	57
Operations Coordinators	51
Team Leads	49
Inventory Control Supervisors	48
Production Leads	48
Appointment Setters	45
Logistics Specialists	45

SOURCE: LIGHTCAST 2024.1

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. Burlington and Loma Linda University 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 May '23 to April '24

Company	Total/Unique (May 2023 - Apr 2024)	Posting Intensity	Median Posting Duration
Burlington	436 / 79	6 : 1	32 days
Loma Linda University Health	385 / 46	8 : 1	19 days
Flex	57 / 46	1 : 1	18 days
Clean Energy Solutions	63 / 35	2 : 1	39 days
GXO Logistics	764 / 34	22 : 1	48 days
El Super	89 / 33	3 : 1	41 days
Big Lots	70 / 32	2 : 1	23 days
Inland Empire Health Plan	121 / 31	4 : 1	30 days
Target	271 / 28	10 : 1	30 days
Lululemon	68 / 27	3 : 1	34 days

SOURCE: LIGHTCAST 2024.1

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.⁵

Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D May '23 to April '24

Common skills	Total Postings	Skill Growth Relative to Market
Communication	2150	Lagging
Operations	2135	Stable
Management	1918	Stable
Customer Service	1489	Stable
Leadership	1360	Stable
Microsoft Excel	993	Growing
Detail Oriented	965	Stable
Planning	964	Growing
Problem Solving	951	Growing
Microsoft Office	868	Growing

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

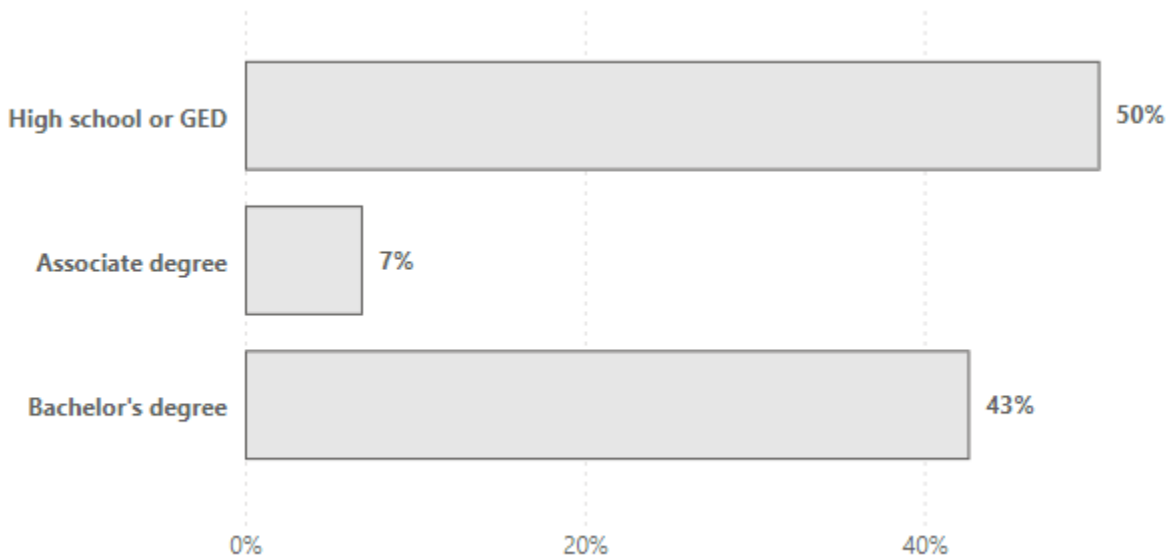
Specialized skills	Total Postings	Skill Growth Relative to Market
Warehousing	1427	Growing
Supply Chain	662	Rapidly Growing
Inventory Management	610	Growing
Inventory Control	522	Growing
Auditing	521	Rapidly Growing
Warehouse Management Systems	473	Growing
Purchasing	436	Rapidly Growing
Key Performance Indicators (KPIs)	415	Growing
Process Improvement	411	Rapidly Growing
Logistics	386	Growing

Computer Skills	Total Postings	Skill Growth Relative to Market
Microsoft Excel	993	Growing
Microsoft Office	868	Growing
Microsoft Outlook	553	Rapidly Growing
Warehouse Management Systems	473	Growing
Microsoft PowerPoint	389	Rapidly Growing
Microsoft Word	293	Stable
SAP Applications	254	Rapidly Growing
Inventory Management System	114	Growing
Microsoft Access	99	Lagging
Spreadsheets	98	Rapidly Growing

SOURCE: LIGHTCAST 2024.1

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with high school diploma or equivalent (50%) higher than bachelor's degree (43%) but significantly greater than associate degree (7%).

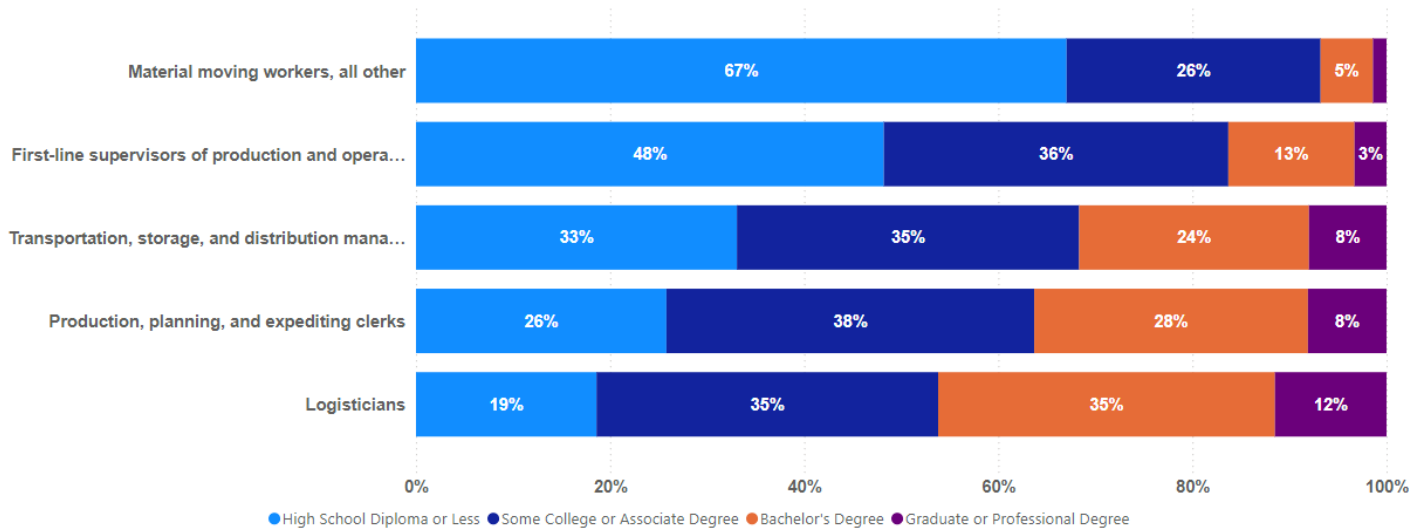
Exhibit 8 Minimum educational requirements in job postings for this occupational group, May '23 to April '24



SOURCE: LIGHTCAST 2024.1

For the middle-skill occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 26% and 38% of workers have completed some college or an associate degree as their highest level of education. For the above middle-skill occupation, Logisticians, 35% have completed a bachelor's degree.

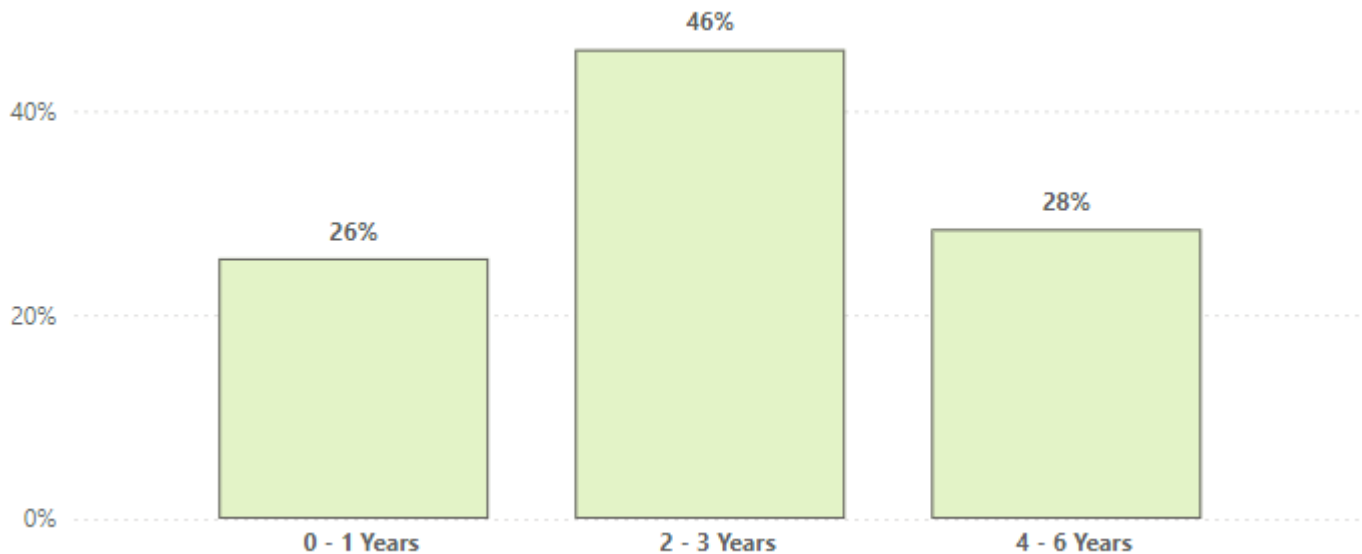
Exhibit 9 National-level Education Attainment for Occupations



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The plurality (46%) of employers listing minimum experience requirements sought candidates with 2 - 3 years of previous work experience.

Exhibit 10 Work experience requirements, IE/D May '23 to April '24



SOURCE: LIGHTCAST 2024.1

Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Logistics and Materials Transportation (TOP 0510.00) programs over the last three academic years (2020-2023). In the previous three academic years, three regional community colleges issued an average of 53 awards in relevant programs.

Exhibit 11 Annual average community college awards for Logistics and Materials Transportation (TOP 0510.00)

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
0510.00	Logistics and Materials Transportation	Norco College	30	30	32	31
0510.00	Logistics and Materials Transportation	Chaffey	4	14	21	13
0510.00	Logistics and Materials Transportation	Barstow	6	14	7	9
Total			40	58	60	53

SOURCE: MIS DATA MART

Non-Community College Supply

Award completion data is available for Logistics, Materials, and Supply Chain Management (52.0203) in the IE/D for non-community college programs.

In the previous three academic years, one regional non-community colleges institution issued an average of 2 awards in relevant programs.

CIP	CIP with Title	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
52.0203	52.0203 - Logistics, Materials, and Supply Chain Management	University of Redlands	1	1	3	2
Total			1	1	3	2

SOURCE: IPEDS

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 Logistics and Materials Transportation strong workforce program outcomes, IE/D, most recent academic year

Program metric title	Inland Empire/Desert	Statewide
Attained a living wage (completers and skills-builders)	80%	65%
Completed 9+ career education units in one year	38%	42%
Job closely related to the field of study	57%	78%
Median annual earnings (all exiters)	\$66,214	\$50,044
Students who attained a noncredit workforce milestone in a year	69%	67%
Students who earned a degree, certificate, or attained apprenticeship	35	144
Unduplicated count of enrolled students	243	1,130

SOURCE: LAUNCHBOARD

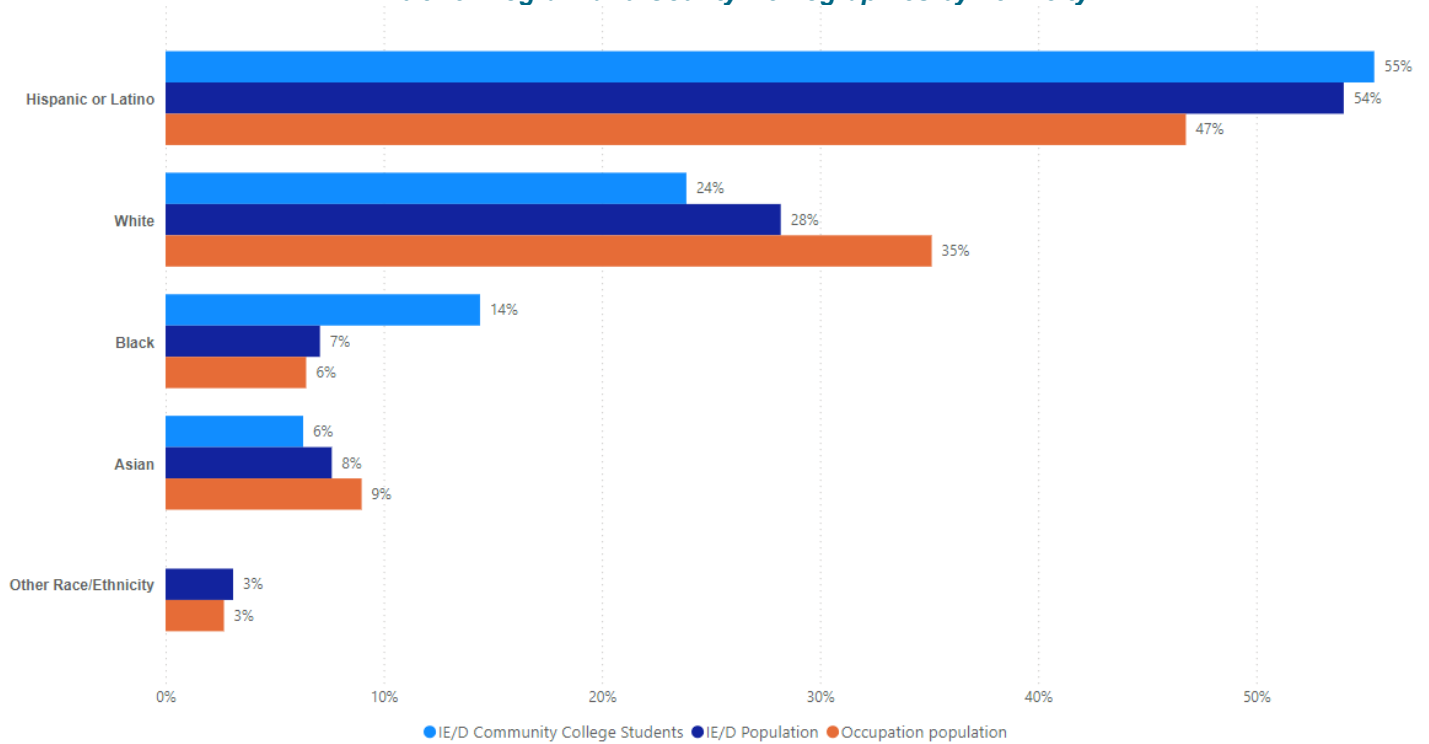
Building an Inclusive Economy

This section examines demographic data for IE/D community college students in Logistics and Materials Transportation programs compared to the IE/D population. We also include demographics for related occupation data for the five occupations related to logistics management. 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, 55% of students enrolled in Logistics and Materials Transportation programs are Hispanic/Latino, which is higher than Hispanic/Latino workers in occupations related to logistics management in the IE/D region (47%). Additionally, 6% of the IE/D population that are employed in occupations related to logistics management are Black, which is significantly lower than both IE/D community college students (14%) and IE/D population (7%). Though 35% of the workers employed in occupations related to logistics management are White, only 24% of students in Logistics and Materials Transportation programs and 28% of the IE/D population are White.

Exhibit 13 Program and County Demographics by Ethnicity



SOURCE: LIGHTCAST 2024.1 AND LAUNCHBOARD

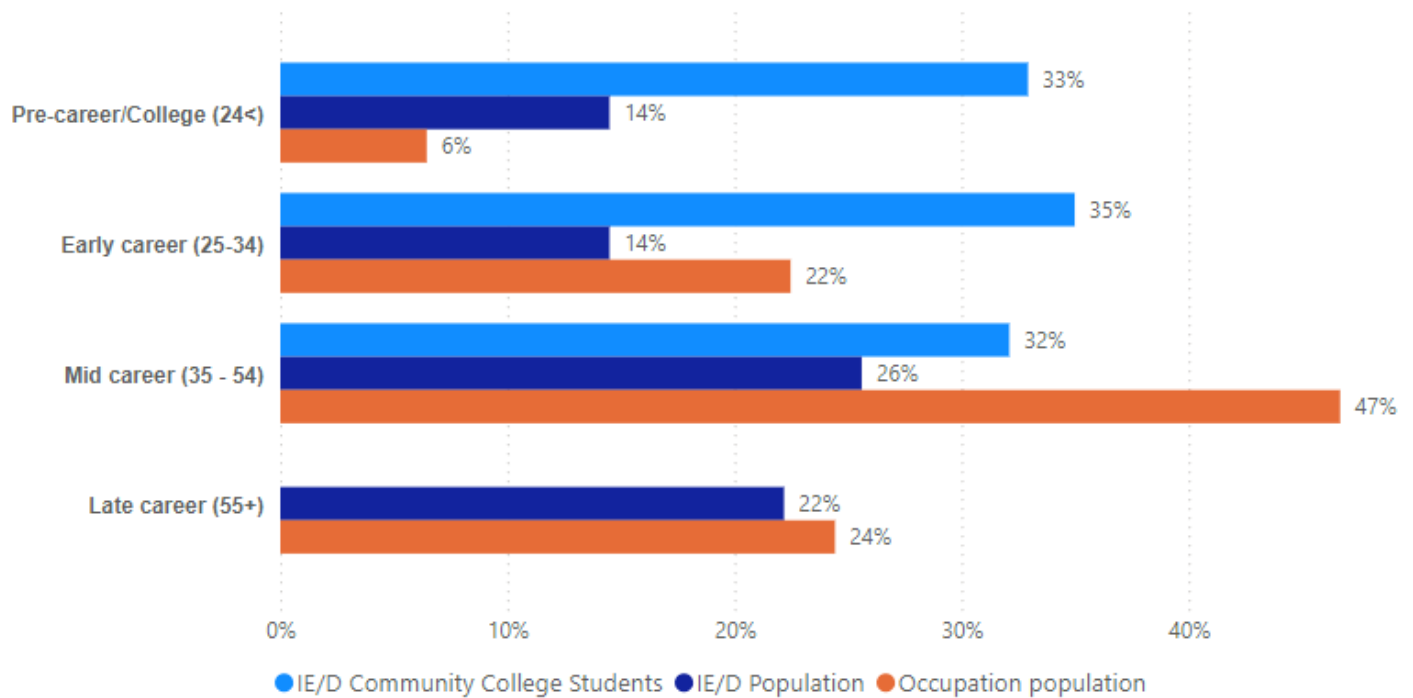
Most IE/D professionals in logistics management occupations are Hispanic/Latino or White (82%), “mid-career” or “late career” age categories (71%), and male (63%). Most community college students in related programs are Hispanic/Latino (55%), “pre-career/college” or “early career” age categories (68%), and male (60%). 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 women into these programs.

Exhibit 14 compares the age of IE/D community college students enrolled in Logistics and Materials Transportation programs compared to the IE/D population.

The majority of students enrolled in Logistics and Materials Transportation programs are either in the “pre-career/college” category or “early career “category (68%) as compared to IE/D population (28%) and workforce (28%) in these five occupations related to logistics management. These programs are an important entry point for young logistics management professionals.

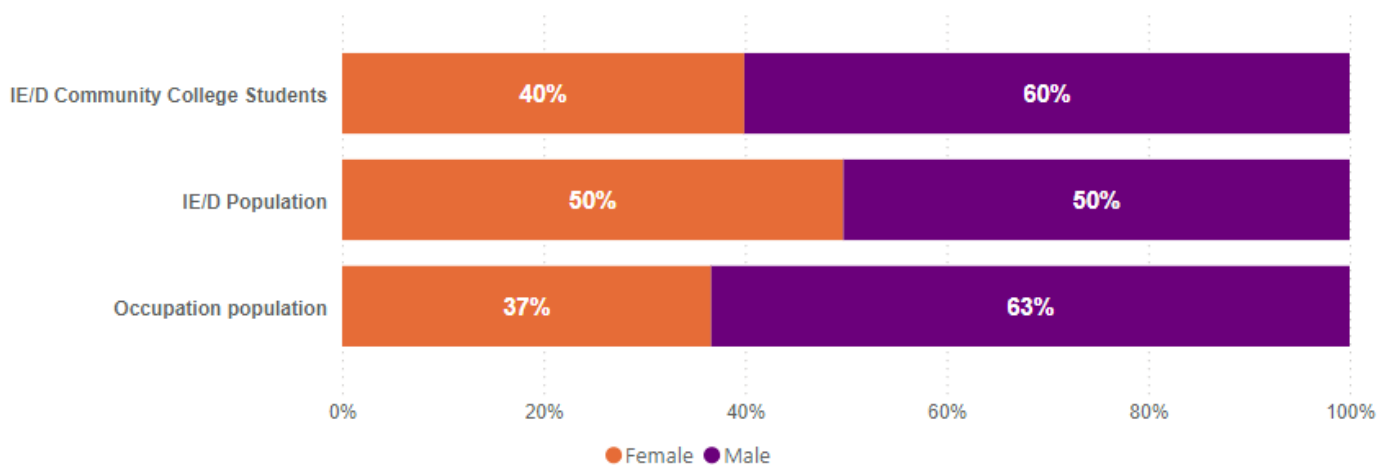
Exhibit 14 Program and County Demographics by Age



SOURCE: LIGHTCAST 2024.1

Exhibit 15 compares the gender of IE/D County community college students enrolled in Logistics and Materials Transportation programs compared to the IE/D population. We also include demographics for related occupation data for the five occupations related to logistics management to identify potential diversity and equity issues addressable by community college programs.

Exhibit 15 Program and County Demographics by Gender



SOURCE: LIGHTCAST 2024.1

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. https://lightcast.io/
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: https://livingwage.mit.edu/pages/methodology 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 https://www.bls.gov/emp/documentation/education/tech.htm
Educational Supply	The CCCC Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu 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 https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
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: https://www.calpassplus.org/LaunchBoard/Home.aspx