










# Supply Chain Management and Logistics Occupations

## Labor Market Analysis: San Diego County

April 2023

### Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED EDUCATION FOR MAJORITY OF OCCUPATIONS ANALYZED
 <b>Proceed with Caution</b>	 	 	<input type="checkbox"/> Doctorate Degree <input type="checkbox"/> Master's Degree <input checked="" type="checkbox"/> Bachelor's Degree <input type="checkbox"/> Associate Degree <input type="checkbox"/> Some College or Certificate <input type="checkbox"/> HS Diploma or Equivalent <input type="checkbox"/> Less than a HS Diploma <input type="checkbox"/> Apprenticeship
SUPPORT FOR PROGRAM MODIFICATION?	NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING	NUMBER OF ANNUAL JOB OPENINGS	
 	<b>HIGH</b> 	<b>HIGH</b> 	

This brief provides labor market information about *Supply Chain Management and Logistics Occupations* to assist the San Diego and Imperial Counties Community Colleges with program development and strategic planning. *Supply Chain Management and Logistics Occupations* include “Buyers and Purchasing Agents,” “Logisticians,” “Production, Planning, and Expediting Clerks,” and “Project Management Specialists.” According to available labor market information, *Supply Chain Management and Logistics Occupations* in San Diego County have a labor market demand of 2,516 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and 11 institutions supply 1,482 awards for these occupations, suggesting that there is a supply gap in the labor market. On average, entry-level and median wages are above the living wage. This brief recommends that the colleges proceed with caution when developing a new program and supports a program modification because 1) there is a supply gap in San Diego County; 2) these occupations’ entry-level and median earnings are above the living wage; and 3) there is a high number of annual job openings. Colleges should note that **employers typically require a bachelor’s degree as the minimum educational requirement for these occupations.**

## Introduction

This report provides labor market information in San Diego County for the following occupational codes in the Standard Occupational Classification (SOC)<sup>1</sup> system:

- **Buyers and Purchasing Agents** (SOC 13-1020): Purchase farm products either for further processing or resale. Includes tree farm contractors, grain brokers and market operators, grain buyers, and tobacco buyers. May negotiate contracts. Buy merchandise or commodities, other than farm products, for resale to consumers at the wholesale or retail level, including both durable and nondurable goods. Analyze past buying trends, sales records, price, and quality of merchandise to determine value and yield. Select, order, and authorize payment for merchandise according to contractual agreements. May conduct meetings with sales personnel and introduce new products. May negotiate contracts. Includes assistant wholesale and retail buyers of nonfarm products. Purchase machinery, equipment, tools, parts, supplies, or services necessary for the operation of an establishment. Purchase raw or semifinished materials for manufacturing. May negotiate contracts.
- **Logisticians** (SOC 13-1081): Analyze and coordinate the ongoing logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.
- **Production, Planning and Expediting Clerks** (SOC 43-5061): Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule. Duties include reviewing and distributing production, work, and shipment schedules; conferring with department supervisors to determine progress of work and completion dates; and compiling reports on progress of work, inventory levels, costs, and production problems.
- **Project Management Specialists** (SOC 13-1082): Analyze and coordinate the schedule, timeline, procurement, staffing, and budget of a product or service on a per project basis. Lead and guide the work of technical staff. May serve as a point of contact for the client or customer.

For the purpose of this report, these occupations are referred to as *Supply Chain Management and Logistics Occupations*.

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<sup>1</sup> 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. [bls.gov/soc](https://www.bls.gov/soc/).

## Projected Occupational Demand

Between 2022 and 2027, *Supply Chain Management and Logistics Occupations* are projected to increase by 1,591 net jobs or seven percent (Exhibit 1a). Employers in San Diego County will need to hire 2,516 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

**Exhibit 1a: Number of Jobs for Supply Chain Management and Logistics Occupations (2012-2027)<sup>2</sup>**

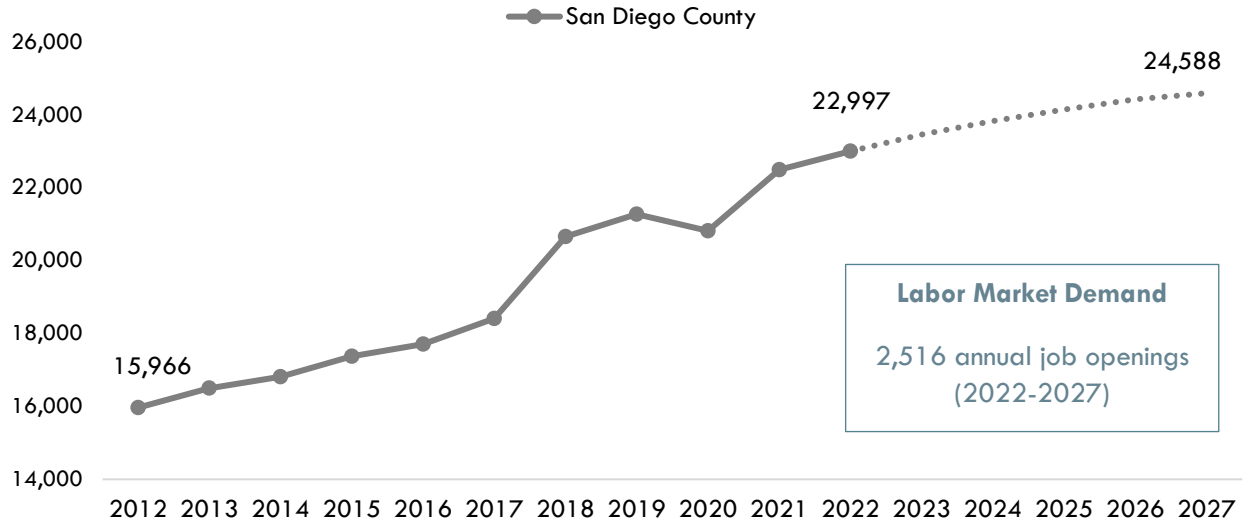


Exhibit 1b disaggregates the projected number of jobs change by occupation. “Project Management Specialists” are projected to have the most labor market demand between 2022 and 2027, with 849 annual job openings.

**Exhibit 1b: Number of Jobs for Supply Chain Management and Logistics Occupations in San Diego County (2022-2027)<sup>3</sup>**

Occupational Title	2022 Jobs	2027 Jobs	2022 - 2027 Net Jobs Change	2022-2027 % Net Jobs Change	Annual Job Openings (Demand)
Project Management Specialists	8,383	9,130	747	9%	849
Production, Planning, and Expediting Clerks	4,819	5,112	293	6%	609
Buyers and Purchasing Agents	5,251	5,311	60	1%	545
Logisticians	4,544	5,035	491	11%	513
<b>Total</b>	<b>22,997</b>	<b>24,587</b>	<b>1,591</b>	<b>7%</b>	<b>2,516</b>

<sup>2</sup> Lightcast 2023.01; QCEW, Non-QCEW, Self-Employed.

<sup>3</sup> Lightcast 2023.01; QCEW, Non-QCEW, Self-Employed.

## Earnings

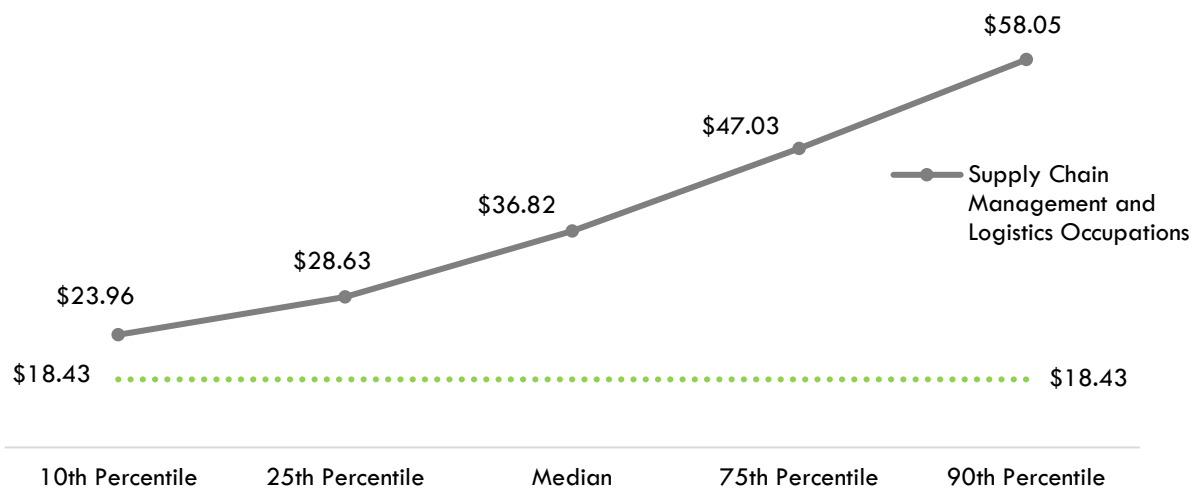
Exhibit 2a disaggregates hourly earnings by occupation. The entry-level hourly earnings for *Supply Chain Management and Logistics Occupations* range from \$19.36 to \$36.55.

**Exhibit 2a: Hourly Earnings for Supply Chain Management and Logistics Occupations in San Diego County<sup>4</sup>**

Occupational Title	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Project Management Specialists	\$36.55	\$47.74	\$62.09
Logisticians	\$32.56	\$40.30	\$49.56
Buyers and Purchasing Agents	\$26.03	\$35.67	\$46.48
Production, Planning, and Expediting Clerks	\$19.36	\$23.58	\$30.01

On average, the entry-level hourly earnings for *Supply Chain Management and Logistics Occupations* are \$28.63; this is more than the living wage for a single adult in San Diego County, which is \$18.43 per hour (Exhibit 2b).<sup>5</sup>

**Exhibit 2b: Average Hourly Earnings<sup>6</sup> for Supply Chain Management and Logistics Occupations in San Diego County<sup>7</sup>**



<sup>4</sup> Lightcast 2023.01; QCEW, Non-QCEW, Self-Employed.

<sup>5</sup> "Family Needs Calculator (formerly the California Family Needs Calculator)," Insight: Center for Community Economic Development, last updated 2021. [insightccd.org/family-needs-calculator/](https://insightccd.org/family-needs-calculator/).

<sup>6</sup> 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.

<sup>7</sup> Lightcast 2023.01; QCEW, Non-QCEW, Self-Employed.

## Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.<sup>8</sup> There are **five** TOP codes and **10** CIP codes related to *Supply Chain Management and Logistics Occupations* (Exhibit 3).

**Exhibit 3: Related TOP and CIP Codes for *Supply Chain Management and Logistics Occupations*<sup>9</sup>**

TOP or CIP Code	TOP or CIP Program Title
TOP 0501.00	Business and Commerce, General
TOP 0508.00	International Business and Trade
TOP 0509.70	E-Commerce (Business Emphasis)
TOP 0510.00	Logistics and Materials Transportation
TOP 0599.00	Other Business and Management
CIP 49.9999	Transportation and Materials Moving, Other
CIP 52.0101	Business/Commerce, General
CIP 52.0203	Logistics, Materials, and Supply Chain Management
CIP 52.0208	E-Commerce/Electronic Commerce
CIP 52.0211	Project Management
CIP 52.0299	Business Administration, Management and Operations, Other
CIP 52.0410	Traffic, Customs, and Transportation Clerk/Technician
CIP 52.0499	Business Operations Support and Secretarial Services, Other
CIP 52.1101	International Business/Trade/Commerce
CIP 52.9999	Business, Management, Marketing, and Related Support Services, Other

According to TOP data, **seven** community colleges supply the region with awards for these occupations: Cuyamaca College, Grossmont College, MiraCosta College, Palomar College, San Diego College of Continuing Education, San Diego Mesa College, and Southwestern College. According to CIP data, **four** non-community-college institutions supply the region with awards: Ashford University, San Diego Global Knowledge University, San Diego State University, and University of San Diego (Exhibit 4).

<sup>8</sup> TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart ([datamart.cccco.edu](http://datamart.cccco.edu)) and CIP data comes from the Integrated Postsecondary Education Data System ([nces.ed.gov/ipeds/use-the-data](http://nces.ed.gov/ipeds/use-the-data)).

<sup>9</sup> This brief uses a conservative estimate of program supply and only calculates awards from the TOP codes in Exhibit 3.

**Exhibit 4: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions  
(Program Year 2017-18 through Program Year 2020-21 Average)**

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY18-19 to PY20-21)	Other Educational Institutions 3-Yr Annual Average Awards (PY17-18 to PY19-20)	3-Yr Total Average Supply (PY17-18 to PY20-21)
0501.00	Business and Commerce, General	<b>255</b>	<b>0</b>	<b>255</b>
	• Cuyamaca	9	0	
	• Grossmont	15	0	
	• MiraCosta	17	0	
	• Palomar	55	0	
	• San Diego Cont. Ed.	136	0	
	• San Diego Mesa	23	0	
0508.00	International Business and Trade	<b>5</b>	<b>0</b>	<b>5</b>
	• Grossmont	1	0	
	• Southwestern	4	0	
0509.70	E-Commerce (Business Emphasis)	<b>1</b>	<b>0</b>	<b>1</b>
	• Southwestern	1	0	
0510.00	Logistics and Materials Transportation	<b>6</b>	<b>0</b>	<b>6</b>
	• Southwestern	6	0	
52.0203	Logistics, Materials, and Supply Chain Management	<b>0</b>	<b>121</b>	<b>121</b>
	• Ashford University	0	117	
	• University of San Diego	0	4	
52.0208	E-Commerce/Electronic Commerce	<b>0</b>	<b>24</b>	<b>24</b>
	• Ashford University	0	24	
52.0211	Project Management	<b>0</b>	<b>111</b>	<b>111</b>
	• Ashford University	0	111	
52.0299	Business Administration, Management and Operations, Other	<b>0</b>	<b>769</b>	<b>769</b>
	• Ashford University	0	751	
	• San Diego Global Knowledge University	0	18	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY18-19 to PY20-21)	Other Educational Institutions 3-Yr Annual Average Awards (PY17-18 to PY19-20)	3-Yr Total Average Supply (PY17-18 to PY20-21)
52.1101	International Business/Trade/Commerce	0	190	190
	• Ashford University	0	29	
	• San Diego State University	0	111	
	• University of San Diego	0	50	
			<b>Total</b>	<b>1,482</b>

## Demand vs. Supply

Comparing labor demand (annual openings) with labor supply<sup>10</sup> suggests that there is a **supply gap** for these occupations in San Diego County, with 2,516 annual openings and 1,482 awards. Comparatively, there are 25,491 annual openings in California and 7,380 awards, suggesting that there is also a supply gap across the state<sup>11</sup> (Exhibit 5).

### Exhibit 5: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply <sup>12</sup> (Total Annual Average Supply)	Supply Gap or Oversupply
San Diego	2,516	1,482	1,034
California	25,491	7,380	18,111

**Please note:** This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

<sup>10</sup> Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. Lightcast uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

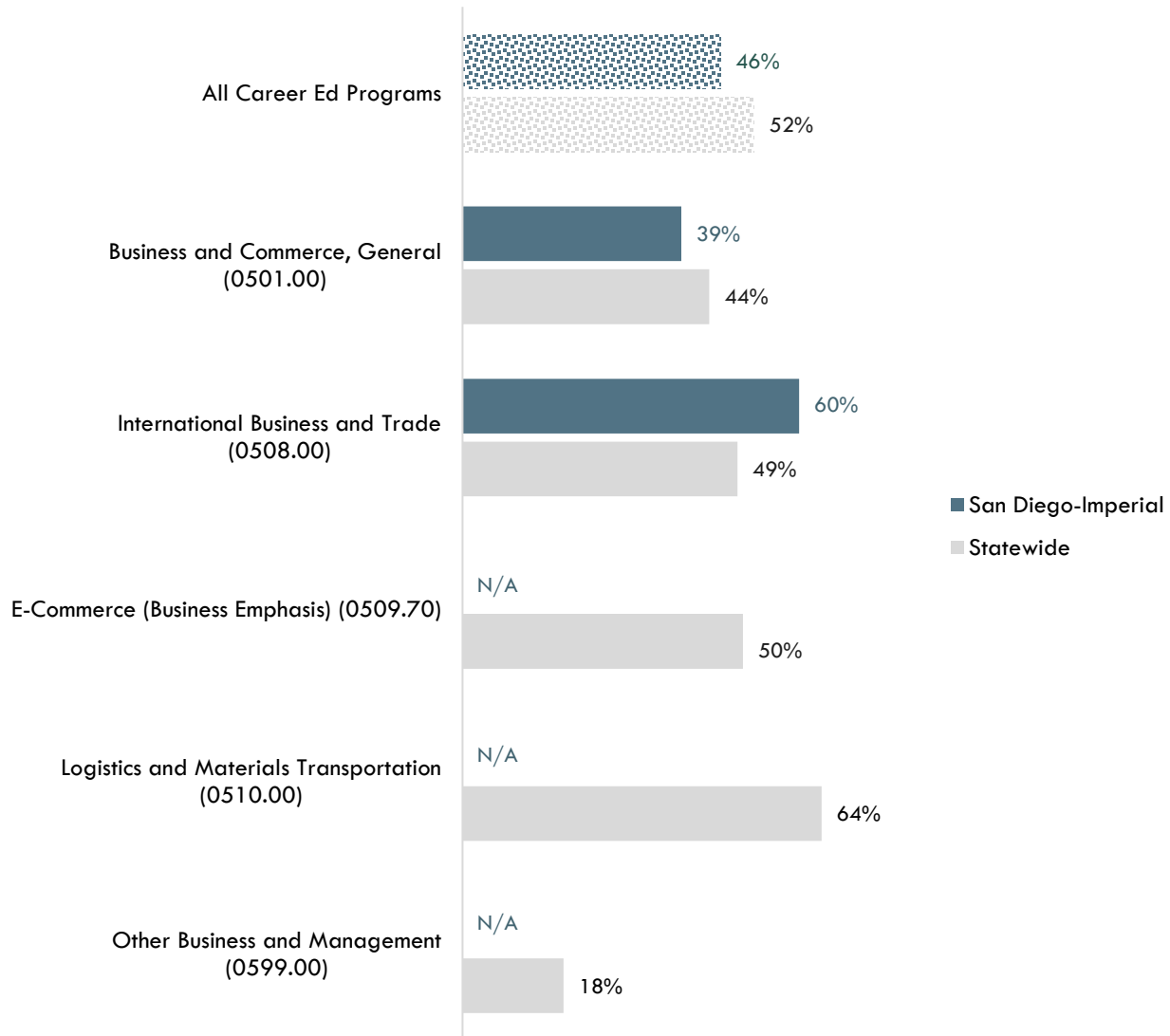
<sup>11</sup> "Supply and Demand," Centers of Excellence Student Outcomes, <https://coecc.net/our-resources/>.

<sup>12</sup> Awards included: associate degree; award <1 year; award 1<2 years; and postsecondary awards.

## Student Outcomes and Regional Comparisons

According to the California Community Colleges LaunchBoard, 39 to 60 percent of students in the San Diego-Imperial region earned a living wage after completing a program related to *Supply Chain Management and Logistics Occupations*, compared 18 to 64 percent statewide and 52 percent of students in Career Education programs in general across the state (Exhibit 6a).<sup>13</sup>

**Exhibit 6a: Percentage of Students Who Earned a Living Wage by Program, PY2019-20<sup>14</sup>**



"N/A" indicates insufficient data

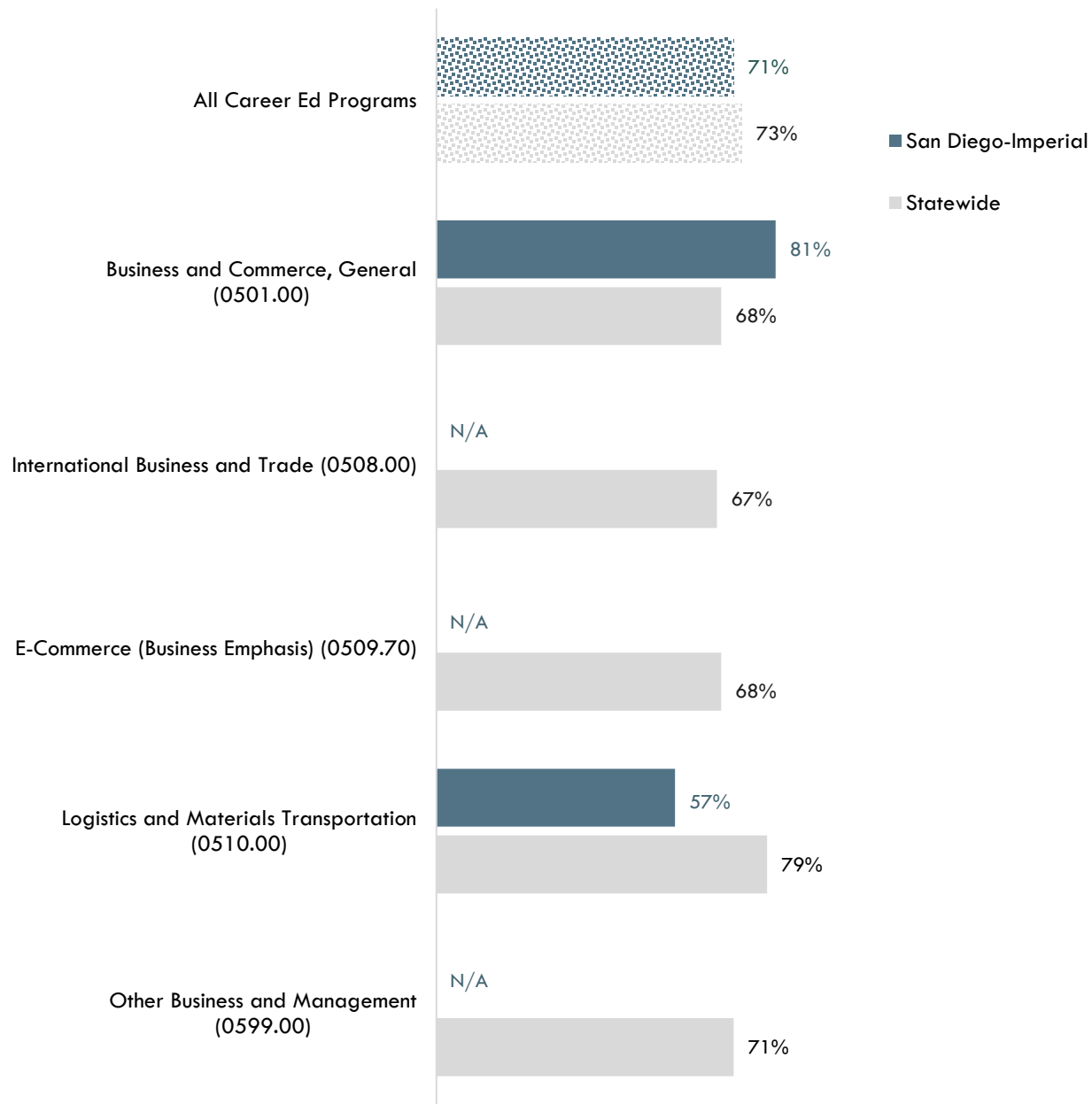
<sup>13</sup> "California Community Colleges Strong Workforce Program," California Community Colleges, [calpassplus.org/LaunchBoard/SWP.aspx](http://calpassplus.org/LaunchBoard/SWP.aspx).

<sup>14</sup> Most recent year with available data is Program Year 2019-20. Among completers and skills builders who exited, the percentage of students who attained a living wage.



According to the California Community Colleges LaunchBoard, 57 to 81 percent of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a program related to *Supply Chain Management and Logistics Occupations*, compared to 67 to 79 percent statewide and 73 percent of students in Career Education programs in general across the state (Exhibit 6b).<sup>15</sup>

**Exhibit 6b: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2018-19<sup>16</sup>**



"N/A" indicates insufficient data

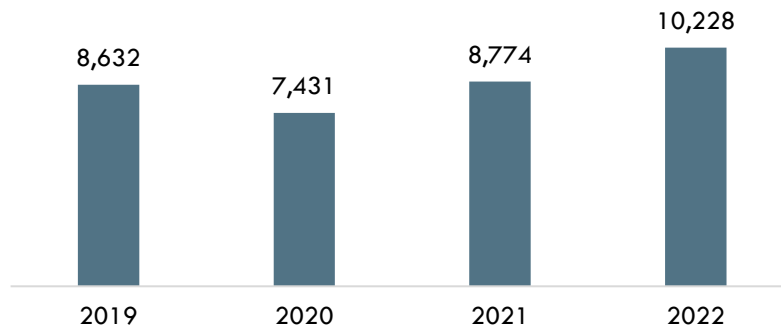
<sup>15</sup> "California Community Colleges Strong Workforce Program," California Community Colleges, [calpassplus.org/LaunchBoard/SWP.aspx](http://calpassplus.org/LaunchBoard/SWP.aspx).

<sup>16</sup> Most recent year with available data is Program Year 2018-19. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

## Online Job Postings

This report analyzes not only historical and projected (traditional LMI) data, but also recent data from online job postings (real-time LMI). Online job postings may provide additional insight about recent changes in the labor market that are not captured by historical data. Between 2019 and 2022, there was an average of 8,766 online job postings per year for *Supply Chain Management and Logistics Occupations* in San Diego County (Exhibit 7). Please note that online job postings do **not** equal labor market demand; demand is represented by annual job openings (see Exhibit 1 b). While this brief includes online jobs postings data to help with curriculum development, the community colleges should note that this type of data is impacted by several variables: employers may post a position multiple times to increase the pool of applicants; a job posting can remain posted after a business decides not to fill a position; or an employer may use one posting to fill multiple positions, for example.

**Exhibit 7: Number of Online Job Postings for *Supply Chain Management and Logistics Occupations* in San Diego County (2018-2022)<sup>17</sup>**



<sup>17</sup> Lightcast; "Job Posting Analytics." 2018-2022.

## Top Employers

Between January 1, 2020 and December 31, 2022, the top five employers in San Diego County for *Supply Chain Management and Logistics Occupations* were [General Atomics](#), [Northrop Grumman](#), [GPAC](#), [University of California San Diego](#), and [Randstad](#) based on online job postings (Exhibit 8).

### Exhibit 8: Top Employers for *Supply Chain Management and Logistics Occupations* in San Diego County<sup>18</sup>

Top Employers	
<ul style="list-style-type: none"><li>• General Atomics</li><li>• Northrop Grumman</li><li>• GPAC</li><li>• University of California San Diego</li><li>• Randstad</li></ul>	<ul style="list-style-type: none"><li>• Thermo Fisher Scientific</li><li>• CyberCoders</li><li>• Aerotek</li><li>• BD</li><li>• Robert Half</li></ul>

## Education, Skills, and Certifications

*Supply Chain Management and Logistics Occupations* have a national educational attainment ranging from a [high school diploma or equivalent](#) to a [bachelor's degree](#) (Exhibit 9a).

### Exhibit 9a: National Educational Attainment for *Supply Chain Management and Logistics Occupations*<sup>19</sup>

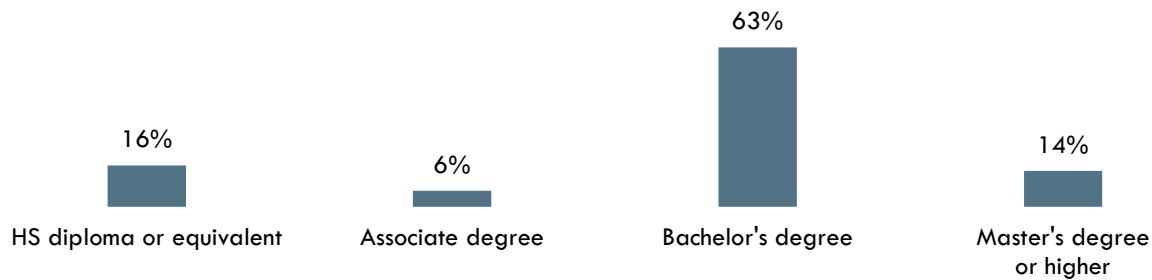
Occupational Title	Typical Entry-Level Education
Buyers and Purchasing Agents	Bachelor's degree
Logisticians	Bachelor's degree
Project Management Specialists	Bachelor's degree
Production, Planning, and Expediting Clerks	High school diploma or equivalent

<sup>18</sup> Lightcast, "Job Posting Analytics." 2020-2022.

<sup>19</sup> Lightcast 2023.01; QCEW, Non-QCEW, Self-Employed.

Based on online job postings between January 1, 2020 and December 31, 2022 in San Diego County, employers posted a **bachelor's degree** as the most requested educational requirement for *Supply Chain Management and Logistics Occupations* (Exhibit 9b).<sup>20</sup>

**Exhibit 9b: Educational Requirements for Supply Chain Management and Logistics Occupations in San Diego County<sup>21</sup>**



\*May not total 100 percent due to rounding

Exhibit 10 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2020 and December 31, 2022.

**Exhibit 10: Top Skills for Supply Chain Management and Logistics Occupations in San Diego County<sup>22</sup>**

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> <li>• Purchasing</li> <li>• Procurement</li> <li>• Project Management</li> <li>• Supply Chain</li> <li>• Finance</li> <li>• Invoicing</li> <li>• Accounting</li> <li>• SAP Applications</li> <li>• Subcontracting</li> <li>• Construction</li> <li>• Material Requirements Planning</li> <li>• Marketing</li> <li>• Contract Management</li> <li>• Inventory Management</li> <li>• Project Schedules</li> </ul>	<ul style="list-style-type: none"> <li>• Communications</li> <li>• Management</li> <li>• Planning</li> <li>• Operations</li> <li>• Microsoft Excel</li> <li>• Customer Service</li> <li>• Leadership</li> <li>• Microsoft Office</li> <li>• Detail Oriented</li> <li>• Problem Solving</li> <li>• Writing</li> <li>• Scheduling</li> <li>• Coordinating</li> <li>• Negotiation</li> <li>• Sales</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Excel</li> <li>• Microsoft PowerPoint</li> <li>• Microsoft Outlook</li> <li>• SAP Applications</li> <li>• Microsoft Word</li> <li>• Microsoft Project</li> <li>• Spreadsheets</li> <li>• Microsoft SharePoint</li> <li>• Microsoft Access</li> <li>• Project Management Software</li> <li>• Microsoft Visio</li> <li>• Primavera</li> <li>• Salesforce</li> <li>• Dashboard</li> <li>• AutoCAD</li> </ul>

<sup>20</sup> Lightcast; "Job Posting Analytics." 2020-2022.

<sup>21</sup> "Educational Attainment for Workers 25 Years and Older by Detailed Occupation," Bureau of Labor Statistics, last modified April 9, 2021. [bls.gov/emp/tables/educational-attainment.htm](https://bls.gov/emp/tables/educational-attainment.htm).

<sup>22</sup> Lightcast; "Job Posting Analytics." 2020-2022.

Exhibit 11 lists the top certification that appeared in online job postings between January 1, 2020 and December 31, 2022.

**Exhibit 11: Top Certification for *Supply Chain Management and Logistics Occupations* in San Diego County<sup>23</sup>**

Top Certification in Online Job Postings

1. Project Management Professional Certification
  2. Secret Clearance
  3. Security Clearance
  4. Certified In Production and Inventory Management
  5. American Production and Inventory Control Society (APICS) Certification
  6. Project Management Certification
  7. Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)
  8. Forklift Certification
  9. Professional Engineer (PE) License
  10. APICS Certified Supply Chain Professional
  11. Six Sigma Black Belt
  12. Top Secret Clearance
  13. Institute For Supply Management
  14. Certified Associate In Project Management
  15. Six Sigma Green Belt
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<sup>23</sup> Lightcast; "Job Posting Analytics." 2020-2022.

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### Important Disclaimers

All representations included in this report have been produced from primary research and/or secondary 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 Centers of Excellence for Labor Market Research (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.