SAN DIEGO & IMPERIAL COUNTIES
COMMUNITY COLLEGES

Desktop Technician Occupations

Labor Market Analysis: San Diego County August 2025

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL OF EDUCATION
Do Not Proceed with New Program	☐ ☒	☑ ☐	☐ Doctorate Degree ☐ Master's Degree ☐ Bachelor's Degree ☑ Associate Degree ☑ Some College or Certificate ☐ HS Diploma or Equivalent ☐ Less Than a HS Diploma ☐ Apprenticeship
SUPPORT FOR PROGRAM MODIFICATION?	**NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING**	**NUMBER OF ANNUAL JOB OPENINGS**	
☑ ☐	HIGH	HIGH	

The San Diego & Imperial Center of Excellence (COE) developed this brief to assist the region's community colleges with strategic planning and program development. *Desktop Technician Occupations* include "Computer Network Support Specialists" and "Computer User Support Specialists." According to available data, *Desktop Technician Occupations* in San Diego County have a labor market demand of 499 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and 16 institutions supply 1,676 awards for these occupations, suggesting that there is an oversupply in the labor market. On average, entry-level wages are above the living wage. This brief recommends to not proceed with developing a new program but supports a program modification because although 1) entry level wages are above the living wage, 2) there is an oversupply in San Diego County and 3) there is a high number of institutions that provide training 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)[1] system:

- **Computer Network Support Specialists** (SOC 15-1231): Analyze, test, troubleshoot, and evaluate existing network systems, such as local area networks (LAN), wide area networks (WAN), cloud networks, servers, and other data communications networks. Perform network maintenance to ensure networks operate correctly with minimal interruption.
- **Computer User Support Specialists** (SOC 15-1232): Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, via telephone, or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

For the purpose of this report, these occupations are referred to as *Desktop Technician Occupations*.

[1] 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. https://www.bls.gov/soc/.

Projected Occupational Demand

Between 2023 and 2028, businesses in San Diego County will need to hire 499 employees annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example (Exhibit 1). Most of this labor market demand comes from Computer User Support Specialists, which are projected to have the most annual job openings with 427 openings each year between 2023 and 2028.

Exhibit 1: Number of Jobs for *Desktop Technician Occupations* (2023-2028)[2]

Occupational Title	2023 Jobs	2028 Jobs	2023 – 2028 Net Jobs Change	2023 – 2028 % Net Jobs Change	Annual Job Openings (Demand)
Computer User Support Specialists	5,583	5,826	243	4%	427
Computer Network Support Specialists	1,155	998	-157	-14%	72
Total	6,738	6,824	86	1%	499

Earnings

According to traditional[3] labor market information (LMI), entry-level hourly earnings for *Desktop Technician Occupations* range from $27.58 to $30.95 (Exhibit 2).

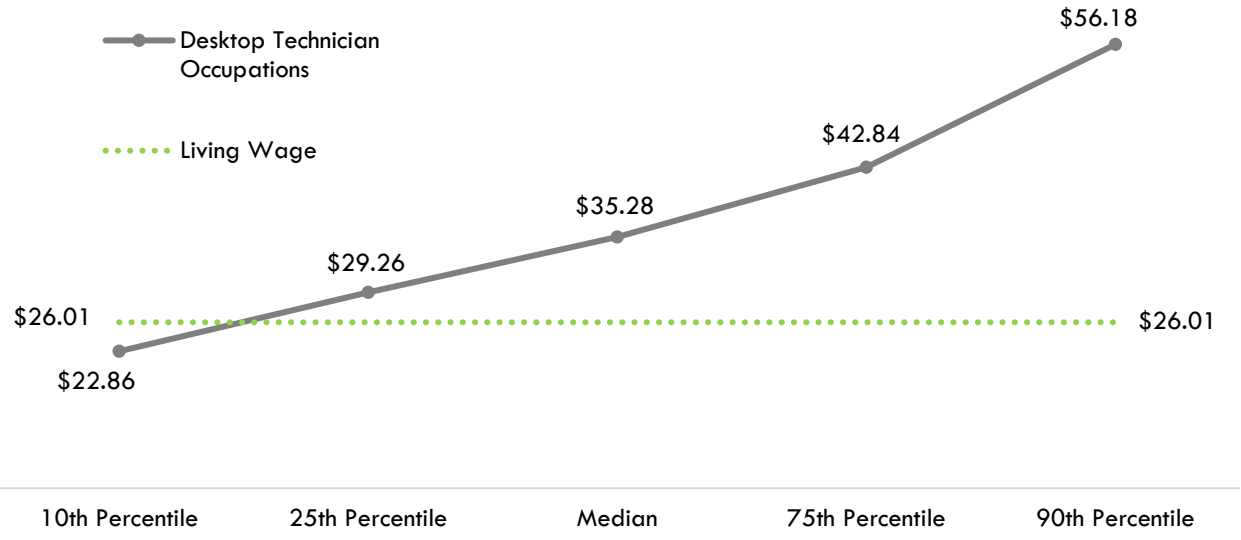
Exhibit 2: Hourly Earnings for *Desktop Technician Occupations* in San Diego County[4]

Occupational Title	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer Network Support Specialists	$30.95	$37.18	$45.63
Computer User Support Specialists	$27.58	$33.37	$40.05

[2] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[3] Traditional LMI is generally historical data captured by the U.S. Bureau of Labor Statistics (BLS) or the California Employment Development Department (EDD). It does not account for recent technological, economic, or legislative changes that may affect labor market demand and wages.
[4] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.

On average, the entry-level hourly earnings for employed *Desktop Technician Occupations* are $29.26—or $60,860.80 annual salary[5]; this is more than the living wage for a single adult in San Diego County, which is $26.01 per hour (Exhibit 3). [6]

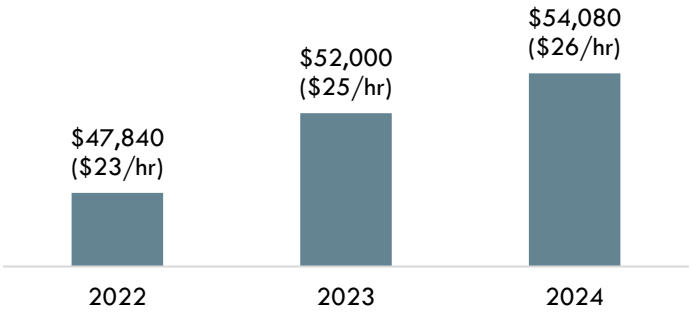
Exhibit 3: Hourly Earnings[7] for *Desktop Technician Occupations* in San Diego County[8]



In online job postings, however, employers advertised between $23 to $26 per hour between January 1, 2022 and December 30, 2024 for *Desktop Technician Occupations* in San Diego County (Exhibit 4).[9] This suggests that, due to labor market forces that may not be captured by traditional LMI, employers in recent years are increasing wages but at hourly watches that are less than the entry-level wages reflected in labor market earnings data.

[5] Annualized salaries assume a full-time position with 2,080 hours. Multiplying the hourly wage with 2,080 yields the annual salary.
[6] Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. selfsufficiencystandard.org/California.
[7] 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.
[8] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[9] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

Exhibit 4: Entry-Level Advertised Salaries in Online Job Postings for *Desktop Technician Occupations* in San Diego County (2022-2024)



*Hourly wages are rounded to the nearest dollar amount.

Expected Level of Education

According to traditional LMI (data reported to EDD and BLS), *Desktop Technician Occupations* have a national educational attainment ranging from a some college, no degree to an associate degree (Exhibit 5).[10]

Exhibit 5: National Educational Attainment for *Desktop Technician Occupations*[11]

Occupational Title	Typical Entry-Level Education
Computer Network Support Specialists	Associate degree
Computer User Support Specialists	Some college, no degree

Similarly, online job postings between January 1, 2022 and December 31, 2024 in San Diego County had a bachelor's degree as the most requested educational requirement for *Desktop Technician Occupations;* however, employers also expected the following certifications (Exhibit 6).[12]

[10] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[11] Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.
[12] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

Exhibit 6: Top Certifications for *Desktop Technician Occupations* in San Diego County in Online Job Postings (2022-2024)[13]

1. CompTIA A+
2. CompTIA Network+
3. Microsoft Certified Professional
4. Secret Clearance
5. CompTIA Security+
6. Security Clearance
7. Cisco Certified Network Associate
8. Microsoft Certified Systems Engineer
9. IAT Level II Certification
10. Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)

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. There are nine TOP codes and eight CIP codes related to *Desktop Technician Occupations* (Exhibit 7).

Exhibit 7: Related TOP and CIP Codes for *Desktop Technician Occupations*[14]

TOP or CIP Code	TOP or CIP Program Title
TOP 0701.00	Information Technology, General
TOP 0702.00	Computer Information Systems
TOP 0707.00	Computer Software Development
TOP 0707.10	Computer Programming
TOP 0707.30	Computer Systems Analysis
TOP 0708.00	Computer Infrastructure and Support
TOP 0708.10	Computer Networking
TOP 0708.20	Computer Support
TOP 0709.00	World Wide Web Administration
CIP 11.0201	Computer Programming/Programmer, General
CIP 11.0501	Computer Systems Analysis/Analyst
CIP 11.0901	Computer Systems Networking and Telecommunications
CIP 11.0902	Cloud Computing
CIP 11.1001	Network and System Administration/Administrator
CIP 11.1002	System, Networking, and LAN/WAN Management/Manager
CIP 11.1003	Computer and Information Systems Security/Auditing/Information Assurance
CIP 11.1006	Computer Support Specialist

[13] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.
[14] This brief uses a conservative estimate of program supply and only calculates awards from the TOP code listed in Exhibit 7.

According to TOP data, nine community colleges supply the region with awards for these occupations: Cuyamaca College, Grossmont College, MiraCosta College, Palomar College, San Diego City College, San Diego College of Continuing Education, San Diego Mesa College, San Diego Miramar College and Southwestern College. According to CIP data, seven non-community-college institutions supply the region with awards: Alliant International University-San Diego, Ashford University, California Institute of Arts & Technology, California Institute of Arts & Technology-National City, ICOHS College, Poway Adult School, and Vista Adult School (Exhibit 8).

Exhibit 8: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Program Year 2020-21 Through Program Year 2023-24 Average)

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
0701.00	Information Technology, General	**61**	**0**	**61**
	Grossmont	**30**	**0**	
	• Associate Degree	14	0	
	• Certificate 16 < 30 units	16	0	
	MiraCosta	**16**	**0**	
	• Associate Degree	7	0	
	• Certificate 16 < 30 units	9	0	
	Palomar	**11**	**0**	
	• Associate Degree	11	0	
	Southwestern	**4**	**0**	
	• Associate Degree	1	0	
	• Certificate 6 < 18 units	3	0	
0702.00	Computer Information Systems	**113**	**0**	**113**
	MiraCosta	**10**	**0**	
	• Associate degree	3	0	
	• Certificate 30 < 60 units	3	0	
	• Certificate 6 < 18 units	4	0	
	Palomar	**13**	**0**	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
	• Associate degree	5	0	
	• Certificate 30 < 60 units	4	0	
	• Certificate 16 < 30 units	4	0	
	San Diego Cont Ed	**55**	**0**	
	• Noncredit 48 < 96 hrs	55	0	
	San Diego Mesa	**14**	**0**	
	• Associate degree	13	0	
	• Certificate 30 < 60 units	1	0	
	San Diego Miramar	**15**	**0**	
	• Associate degree	14	0	
	• Certificate 30 < 60 units	1	0	
	Southwestern	**6**	**0**	
	• Associate degree	6	0	
0707.00	Computer Software Development	**67**	**0**	**67**
	Grossmont	**4**	**0**	
	• Certificate 16 < 30 units	0	0	
	• Certificate 8 < 16 units	4	0	
	MiraCosta	**24**	**0**	
	• Associate degree	10	0	
	• Certificate 16 < 30 units	13	0	
	• Certificate 6 < 18 units	1	0	
	Palomar	**2**	**0**	
	• Associate degree	1	0	
	• Certificate 30 < 60 units	1	0	
	San Diego Cont Ed	**37**	**0**	
	• Noncredit 192 < 288 hrs	37	0	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
0707.10	Computer Programming	**154**	**0**	**154**
	Grossmont	**35**	**0**	
	• Associate degree	16	0	
	• Certificate 30 < 60 units	11	0	
	• Certificate 16 < 30 units	8	0	
	Palomar	**4**	**0**	
	• Certificate 30 < 60 units	0	0	
	• Certificate 8 < 16 units	4	0	
	San Diego City	**1**	**0**	
	• Associate degree	1	0	
	• Certificate 16 < 30 units	0	0	
	San Diego Cont Ed	**109**	**0**	
	• Noncredit 288 < 480 hrs	1	0	
	• Noncredit 144 < 192 hrs	19	0	
	• Noncredit 48 < 96 hrs	89	0	
	Southwestern	**5**	**0**	
	• Associate degree	3	0	
	• Certificate 6 < 18 units	2	0	
0707.30	Computer Systems Analysis	**349**	**0**	**349**
	San Diego Cont Ed	**349**	**0**	
	• Noncredit 480 < 960 hrs	9	0	
	• Noncredit 192 < 288 hrs	6	0	
	• Noncredit 96 < 144 hrs	334	0	
0708.00	Computer Infrastructure and Support	**585**	**0**	**585**
	Grossmont	**55**	**0**	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
	• Associate degree	25	0	
	• Certificate 30 < 60 units	1	0	
	• Certificate 16 < 30 units	29	0	
	MiraCosta	**44**	**0**	
	• Associate degree	15	0	
	• Certificate 30 < 60 units	10	0	
	• Certificate 16 < 30 units	14	0	
	• Certificate 6 < 18 units	5	0	
	Palomar	**8**	**0**	
	• Certificate 16 < 30 units	1	0	
	• Certificate 8 < 16 units	7	0	
	San Diego City	**51**	**0**	
	• Associate degree	31	0	
	• Certificate 30 < 60 units	10	0	
	• Certificate 16 < 30 units	10	0	
	San Diego Cont Ed	**427**	**0**	
	• Noncredit 192 < 288 hrs	20	0	
	• Noncredit 96 < 144 hrs	172	0	
	• Noncredit 48 < 96 hrs	38	0	
	• Noncredit < 48 hrs	197	0	
0708.10	Computer Networking	**19**	**0**	**19**
	Cuyamaca	**4**	**0**	
	• Associate degree	4	0	
	• Certificate 30 < 60 units	0	0	
	Palomar	**10**	**0**	
	• Associate degree	5	0	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
	• Certificate 16 < 30 units	5	0	
	San Diego Cont Ed	**5**	**0**	
	• Noncredit 96 < 144 hrs	5	0	
	Southwestern	**0**	**0**	
	• Associate degree	0	0	
0708.20	Computer Support	**205**	**0**	**205**
	MiraCosta	**3**	**0**	
	• Associate degree	1	0	
	• Certificate 16 < 30 units	2	0	
	San Diego Cont Ed	**198**	**0**	
	• Noncredit 288 < 480 hrs	20	0	
	• Noncredit 192 < 288 hrs	33	0	
	• Noncredit 144 < 192 hrs	106	0	
	• Noncredit 96 < 144 hrs	39	0	
	Southwestern	**4**	**0**	
	• Associate degree	4	0	
0709.00	World Wide Web Administration	**0**	**0**	**0**
	Southwestern	**0**	**0**	
	• Certificate 6 < 18 units	0	0	
11.0201	Computer Programming/Programmer, General	**0**	**1**	**1**
	Poway Adult School	**0**	**1**	
	• Certificates < 1 year	0	1	
11.0901	Computer Systems Networking and Telecommunications	**0**	**0**	**0**
	ICOHS College	**0**	**0**	
	• Associate degree	0	0	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
	Poway Adult School	**0**	**0**	
	• Certificates < 1 year	0	0	
11.1001	Network and System Administration/Administrator	**0**	**39**	**39**
	California Institute of Arts & Technology	**0**	**20**	
	• Certificates < 1 year	0	20	
	California Institute of Arts & Technology-National City	**0**	**6**	
	• Certificates < 1 year	0	6	
	ICOHS College	**0**	**13**	
	• Certificates 1 < 2 years	0	10	
	• Certificates < 1 year	0	3	
11.1002	System, Networking, and LAN/WAN Management/Manager	**0**	**31**	**31**
	California Institute of Arts & Technology	**0**	**23**	
	• Certificates < 1 year	0	23	
	California Institute of Arts & Technology-National City	**0**	**8**	
	• Certificates < 1 year	0	8	
11.1003	Computer and Information Systems Security/Auditing/Information Assurance	**0**	**50**	**50**
	Alliant International University-San Diego	**0**	**0**	
	• Postbaccalaureate certificate	0	0	
	Ashford University	**0**	**40**	
	• Bachelor's degree	0	40	
	Vista Adult School	**0**	**10**	
	• Certificates < 1 year	0	10	
11.1006	Computer Support Specialist	**0**	**2**	**2**

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY21-22 to PY23-24)	Other Educational Institutions 3-Yr Annual Average Awards (PY20-21 to PY22-23)	Total Average Supply (PY20-21 to PY22-23)
	ICOHS College	**0**	**2**	
	• Certificates 1 < 2 years	0	2	
			Total	**1,676**

Demand vs. Supply

Comparing labor demand with labor supply[15] suggests that there is an oversupply for these occupations in San Diego County, with 499 annual openings and 1,676 awards. Comparatively, there are 7,268 annual openings in California and 8,036 awards, suggesting that there is an oversupply across the state (Exhibit 9).[16]

Exhibit 9: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	**Supply** (Annual Awards)	**Supply Gap or Oversupply**
San Diego	499	1,676	**- 1,177**
California	7,268	8,036	**- 768**

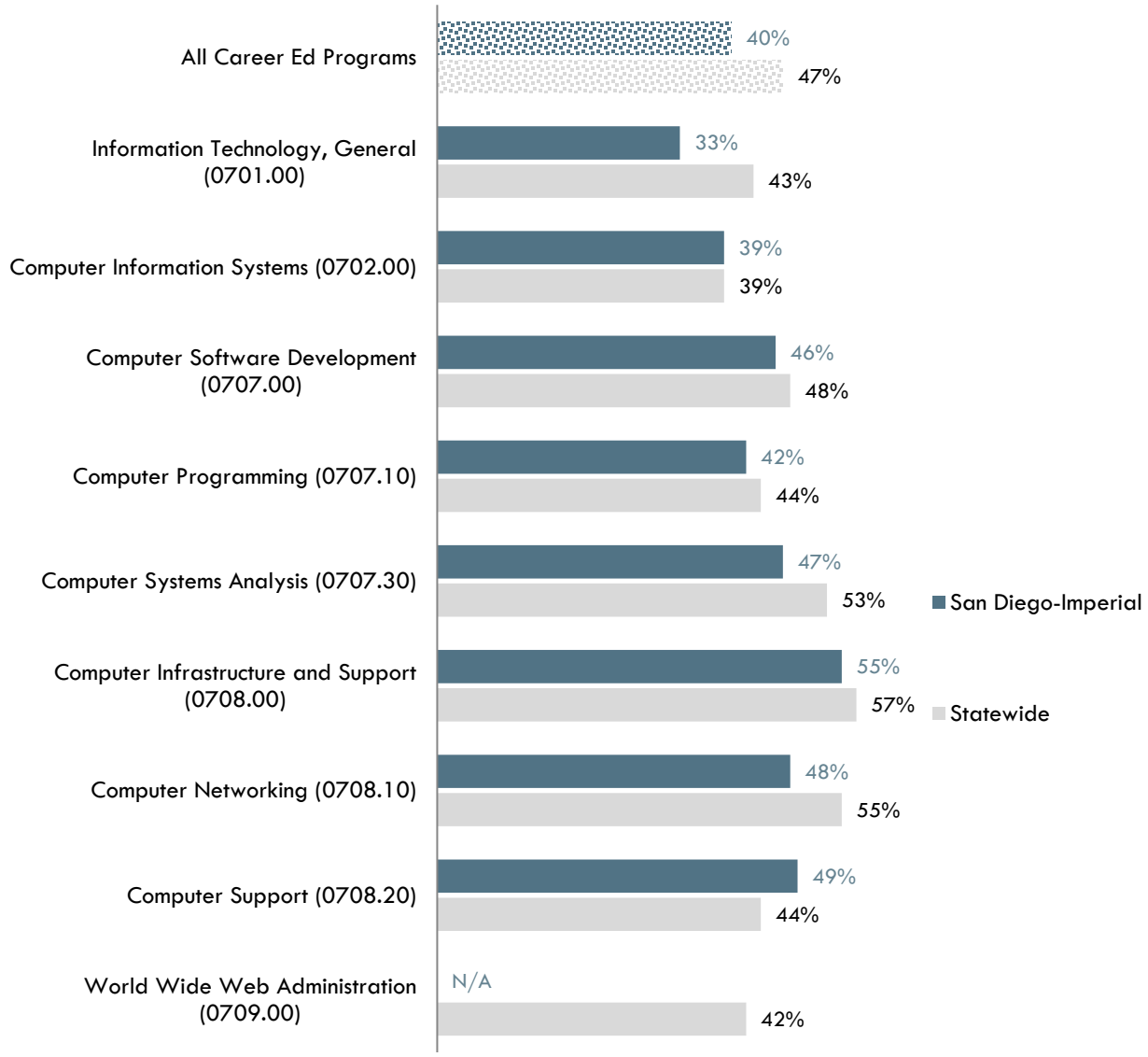
Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers;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

[15] 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.
[16] "Supply and Demand," Centers of Excellence Student Outcomes, coeccc.net/our-resources.

Student Outcomes and Regional Comparisons

According to the California Community Colleges DataVista, 33 to 55 percent of students in the San Diego-Imperial region earned a living wage after completing a program related to *Desktop Technician Occupations*, compared to 39 to 57 percent statewide and 47 percent of students in Career Education programs in general across the state (Exhibit 10).[17]

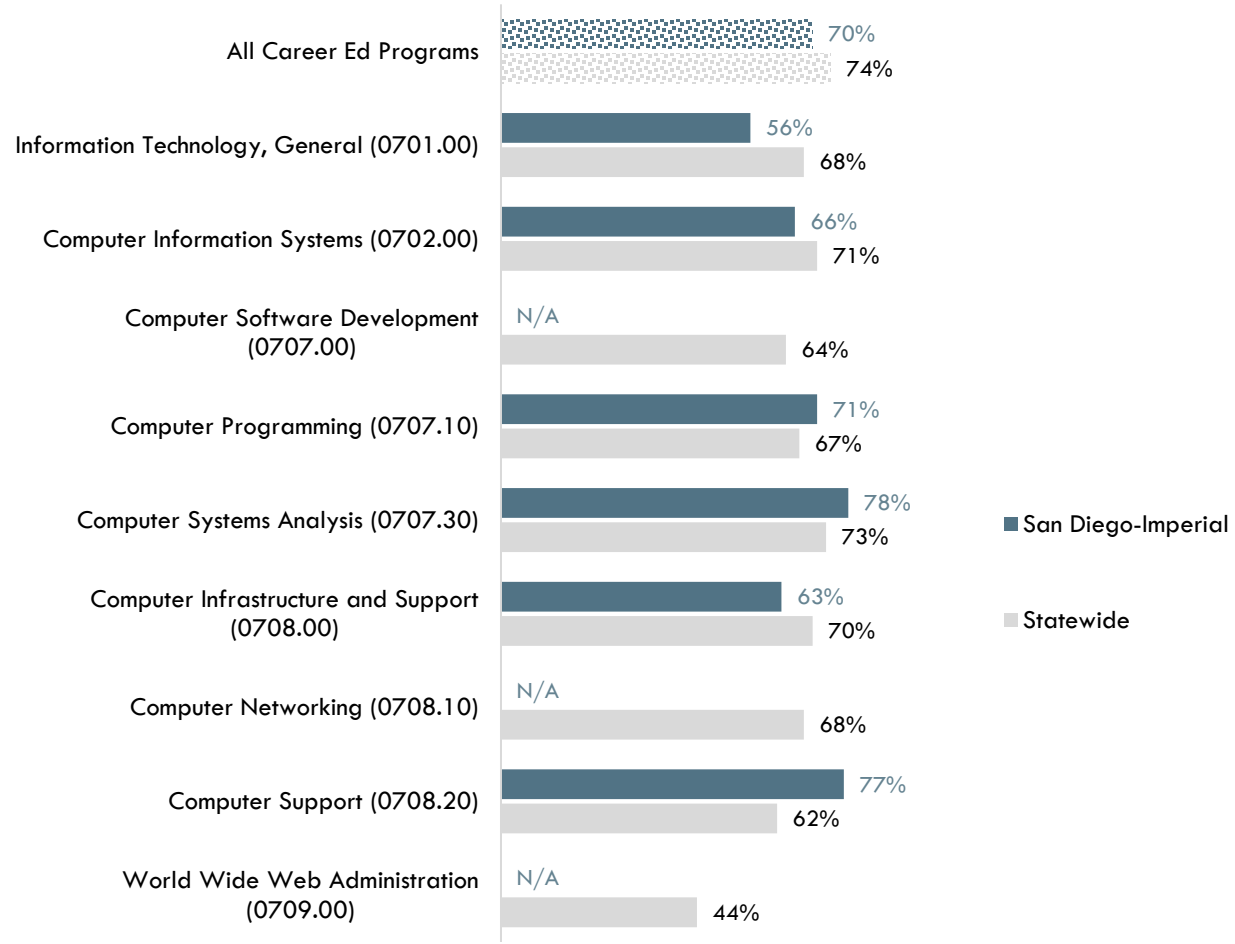
Exhibit 10: Percentage of Students Who Earned a Living Wage by Program, PY2022-23[18]



[17] DataVista, California Community Colleges, datavista.cccco.edu/.
[18] Most recent year with available data is Program Year 2022-23. Among completers and skills builders who exited, the percentage of students who attained a living wage.

According to the California Community Colleges DataVista, 56 to 78 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 *Desktop Technician Occupations,* compared to 44 to 73 percent statewide and 74 percent of students in Career Education programs in general across the state (Exhibit 11).[19]

Exhibit 11: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2021-22[20]



[19] DataVista, California Community Colleges, datavista.cccco.edu/.
[20] Most recent year with available data is Program Year 2021-22. 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.

Employers

Between January 1, 2022 and December 31, 2024, the top five employers in San Diego County for *Desktop Technician Occupations* were Randstad, TEKsystems, Robert Half, Best Buy, and Insight Global based on online job postings (Exhibit 12).

Exhibit 12: Top Employers for *Desktop Technician Occupations* in San Diego County[21]

Top Employers	
• Randstad • TEKsystems • Robert Half • Best Buy • Insight Global	• Leidos • Ledgent • University of California-San Diego • Qualcomm • ServiceNow

Skills

Exhibit 13 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2022 and December 31, 2024.

Exhibit 13: Top Skills for *Desktop Technician Occupations* in San Diego County[22]

Specialized Skills	Soft Skills	Software Skills
• Technical Support • Help Desk Support • Peripheral Devices • Computer Science • Desktop Support • Computer Hardware • Technical Issues • Issue Tracking • Customer Support • Local Area Networks • Virtual Private Networks • Network Troubleshooting • Network Routing • Information Systems • Network Switches	• Troubleshooting • Customer Service • Communication • Problem Solving • Management • Operations • Microsoft Office • Information Technology • Detail Oriented • Writing • Interpersonal Communications • Prioritization • Verbal Communication Skills • Research • Multitasking	• Operating Systems • Microsoft Office • Active Directory • Microsoft Office 365 • Microsoft Windows 10

[21] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.
[22] Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

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