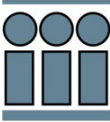


Computer Electronics Occupations

Labor Market Analysis: San Diego County

September 2026

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL(S) OF EDUCATION
 Proceed	 	 	☐ 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	
 	LOW 	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. Computer Electronics Occupations include "Electrical and Electronic Engineering Technologists and Technicians," "Calibration Technologists and Technicians," and "Computer Occupations, All Other." According to available data, Computer Electronics Occupations in San Diego County have a labor market demand of 747 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and three institutions supply an estimated 28 awards for these occupations. On average, entry-level wages are above the living wage. This brief recommends to proceed with developing a new program and supports a program modification because 1) there is a supply gap in San Diego County; 2) a high number of annual job openings exists for these occupations; and 3) average entry-level wages are above the living wage.

Introduction

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

- **Electrical and Electronic Engineering Technologists and Technicians** (SOC 17-3023): Set up and operate specialized or standard test equipment to diagnose, test, or analyze the performance of electronic components, assemblies, or systems.
- **Calibration Technologists and Technicians** (SOC 17-3028): Conduct calibration tests to determine the performance or reliability of mechanical, structural, or electromechanical equipment and maintain or repair measurement devices used for calibration testing.
- **Computer Occupations, All Other** (SOC 15-1299): Perform computer-related work not separately classified in another detailed computer occupation.

For the purpose of this report, these occupations are referred to as Computer Electronics Occupations.

Projected Occupational Demand

Between 2025 and 2030, businesses in San Diego County will need to hire **747** employees annually to fill new jobs and backfill positions made vacant through turnover and retirement (Exhibit 1). Computer Occupations, All Other account for the largest share of demand, with **538** annual openings. Overall employment is projected to increase by **175** jobs, or **two percent**, during the five-year period.

Exhibit 1: Employment Change and Occupational Demand for Computer Electronics Occupations in San Diego County (2025-2030)²

Occupational Title	2025 Jobs	2030 Jobs	2025-2030 Net Jobs Change	2025-2030 % Jobs Change	Annual Job Openings (Demand)
Computer Occupations, All Other	8,835	9,026	191	2%	538
Electrical and Electronic Engineering Technologists and Technicians	2,241	2,222	-19	-1%	198
Calibration Technologists and Technicians	124	127	3	3%	11
Total	11,200	11,375	175	2%	747

¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for collecting, calculating, and disseminating data. [bls.gov/soc](https://www.bls.gov/soc)

² Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

Earnings

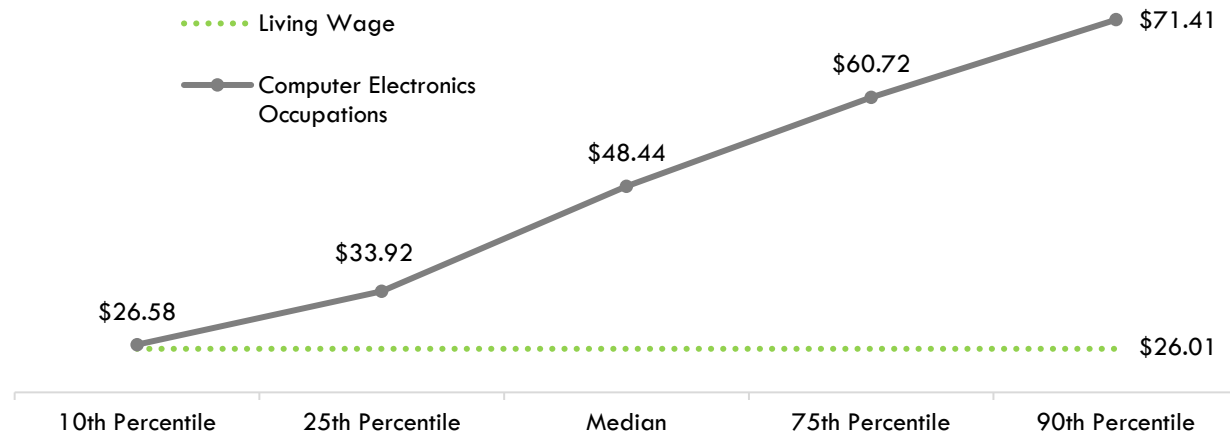
According to traditional³ labor market information (LMI), entry-level hourly earnings for *Computer Electronics Occupations* range from \$28.27 to \$38.79 (Exhibit 2).

Exhibit 2: Hourly Earnings for Computer Electronics Occupations in San Diego County⁴

Occupational Title	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer Occupations, All Other	\$38.79	\$60.52	\$74.94
Electrical and Electronic Engineering Technologists and Technicians	\$34.70	\$43.97	\$59.43
Calibration Technologists and Technicians	\$28.27	\$40.84	\$47.79

On average, entry-level hourly earnings for *Computer Electronics Occupations* are \$33.92—or approximately \$70,559 annually.⁵ This is above the living wage of \$26.01 per hour for a single adult in San Diego County (Exhibit 3).⁶

Exhibit 3: Average Hourly Earnings for Computer Electronics Occupations in San Diego County^{7,8}



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 Q3 2026; QCEW, Non-QCEW, Self-Employed.

⁵ Annualized salaries assume a full-time position with 2,080 work hours. Multiplying the hourly wage by 2,080 yields the annual salary.

⁶ Center for Women's Welfare, University of Washington. The Self-Sufficiency Standard for California 2024.

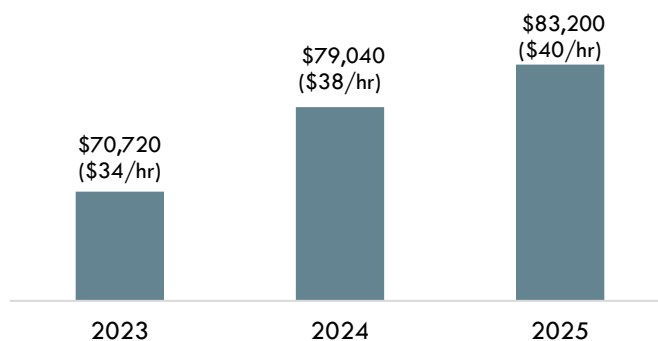
selfsufficiencystandard.org/california

⁷ The 10th and 25th percentiles may be considered entry-level wages; the 75th and 90th percentiles may be considered experienced wages.

⁸ Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

In online job postings, employers also advertised between \$34 to \$40 per hour between January 1, 2023 and December 31, 2025 for *Computer Electronics Occupations* in San Diego County (Exhibit 4).⁹ This suggests that employer-advertised wages in online job postings were higher than the entry-level wages reported in traditional labor market information.

Exhibit 4: Entry-Level Advertised Salaries in Online Job Postings for *Computer Electronics Occupations* in San Diego County (2023-2025)*



*Hourly wages are rounded to the nearest dollar amount

Expected Level of Education

According to traditional LMI reported to the California Employment Development Department and U.S. Bureau of Labor Statistics, *Computer Electronics Occupations* typically require either an [associate degree](#) or a [bachelor's degree](#) for entry-level employment (Exhibit 5).¹⁰

Exhibit 5: National Educational Attainment for *Computer Electronics Occupations*¹¹

Occupational Title	Typical Entry-Level Education
Computer Occupations, All Other	Bachelor's degree
Electrical and Electronic Engineering Technologists and Technicians	Associate degree
Calibration Technologists and Technicians	Associate degree

⁹ Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.

¹⁰ Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

¹¹ Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

Similarly, a [bachelor's degree](#) was the most requested listed educational requirement in online job postings for *Computer Electronics Occupations* in San Diego County between January 1, 2023 and December 31, 2025. Employers also expected the following certifications (Exhibit 6).¹²

Exhibit 6: Top Certifications for Computer Electronics Occupations in San Diego County in Online Job Postings (2023-2025)¹³

- | | |
|--|---|
| 1. Secret Clearance | 6. Top Secret Clearance |
| 2. Security Clearance | 7. GIAC Certifications |
| 3. Top Secret-Sensitive Compartmented Information (TS/SCI Clearance) | 8. CompTIA SecurityX |
| 4. Certified Information Systems Security Professional | 9. IAT Level II Certification |
| 5. CompTIA Security+ | 10. Project Management Professional Certification |

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 [two](#) TOP codes and [five](#) CIP codes related to Computer Electronics Occupations (Exhibit 7).

Exhibit 7: Related TOP and CIP Codes for Computer Electronics Occupations¹⁴

TOP or CIP Code	TOP or CIP Program Title
TOP 0934.00	Electronics and Electric Technology
TOP 0934.10	Computer Electronics
CIP 15.0303	Electrical, Electronic, and Communications Engineering Technology/Technician
CIP 15.0306	Integrated Circuit Design Technology/Technician
CIP 15.0399	Electrical/Electronic Engineering Technologies/Technicians, Other
CIP 15.1201	Computer Engineering Technology/Technician
CIP 15.1203	Computer Hardware Technology/Technician

¹² Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.

¹³ Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.

¹⁴ California Community Colleges Chancellor's Office TOP-CIP crosswalk and confirmed program-code selection for this analysis.

According to TOP data, **three** community college institutions supply the region with awards for these occupations: **San Diego City College**, **San Diego College of Continuing Education**, and **Southwestern College**. According to CIP data, no awards at or below a **bachelor's degree** were reported in the region. Combined, the **three** institutions confer an average of **28** awards annually (Exhibit 8).

Exhibit 8: Number of Awards Conferred by Postsecondary Institutions
(Three-Year Annual Averages)¹⁵¹⁶

TOP or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards	Other Institutions 3-Yr Annual Average Awards	Total Average Supply
0934.00	Electronics and Electric Technology	27	0	27
	San Diego City	1	0	
	• Certificate 16 < 30 units	1	0	
	San Diego Cont Ed	26	0	
	• Noncredit 480 < 960 hrs	4	0	
	• Noncredit 288 < 480 hrs	22	0	
0934.10	Computer Electronics	1	0	1
	Southwestern	1	0	
	• Certificate 6 < 18 units	1	0	
15.0303	Electrical, Electronic, and Communications Engineering Technology/Technician	0	0	0
15.0306	Integrated Circuit Design Technology/Technician	0	0	0
15.0399	Electrical/Electronic Engineering Technologies/Technicians, Other	0	0	0
15.1201	Computer Engineering Technology/Technician	0	0	0
15.1203	Computer Hardware Technology/Technician	0	0	0
	Total	28	0	28

¹⁵ California Community Colleges Chancellor's Office Data Mart, program years 2022-23 through 2024-25.

¹⁶ National Center for Education Statistics, Integrated Postsecondary Education Data System completions, academic years 2021-22 through 2023-24.

Demand vs. Supply

Comparing labor demand with labor supply¹⁷ suggests that there is a **supply gap** for these occupations in San Diego County, with **747** annual openings and **28** average annual awards. Comparatively, there are **7,007** annual openings in California and **1,180** annual awards, suggesting a statewide **supply gap** (Exhibit 9).¹⁸

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

	Demand (Annual Openings)	Supply (Average Annual Awards)	Supply Gap or Oversupply
San Diego	747	28	719
California	7,007	1,180	5,827

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.

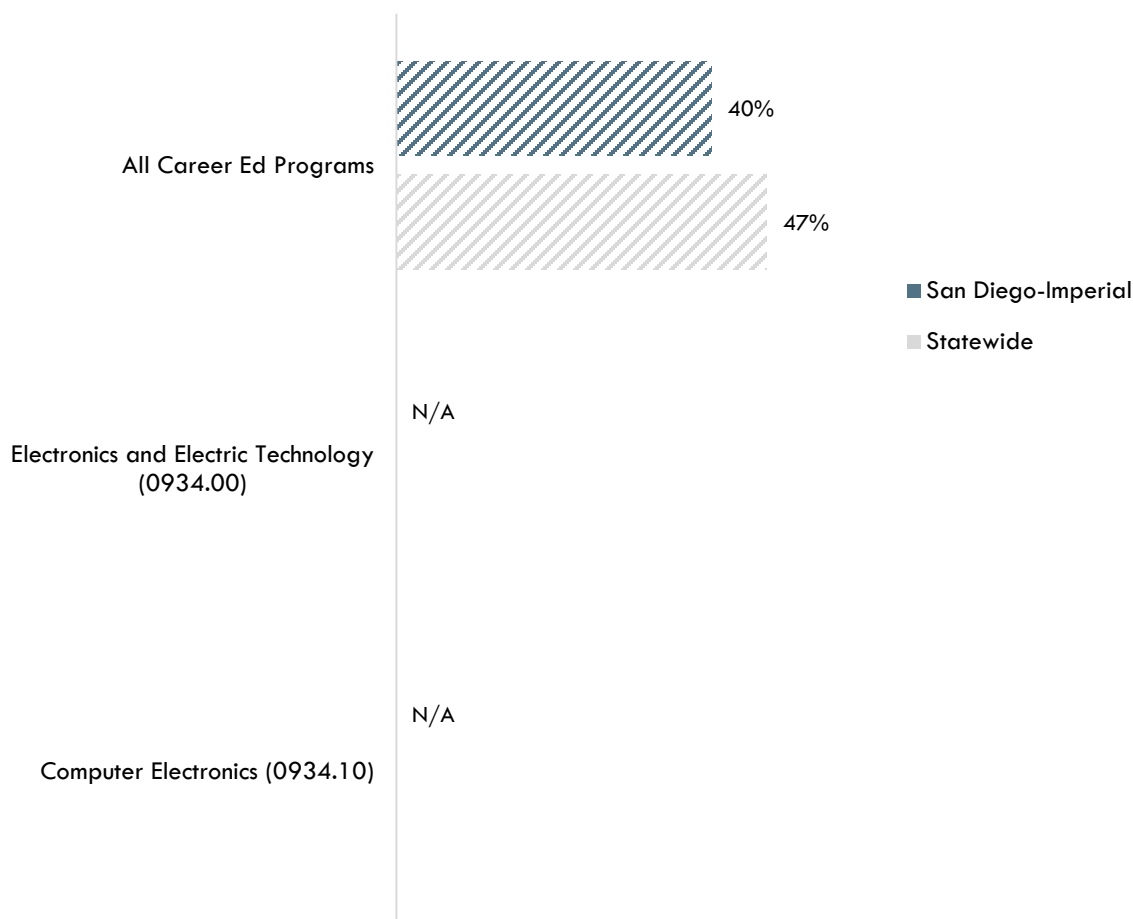
¹⁷ Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. Lightcast uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

¹⁸ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/our-resources.

Student Outcomes and Regional Comparisons

DataVista outcomes for students who earned a living wage were unavailable for Electronics and Electric Technology (TOP 0934.00). Outcomes were also unavailable for Computer Electronics (TOP 0934.10). The current benchmark rates for all Career Education programs were 40% in the San Diego-Imperial region and 47% statewide (Exhibit 10).¹⁹

Exhibit 10: Percentage of Students Who Earned a Living Wage by Program, PY2023-24²⁰



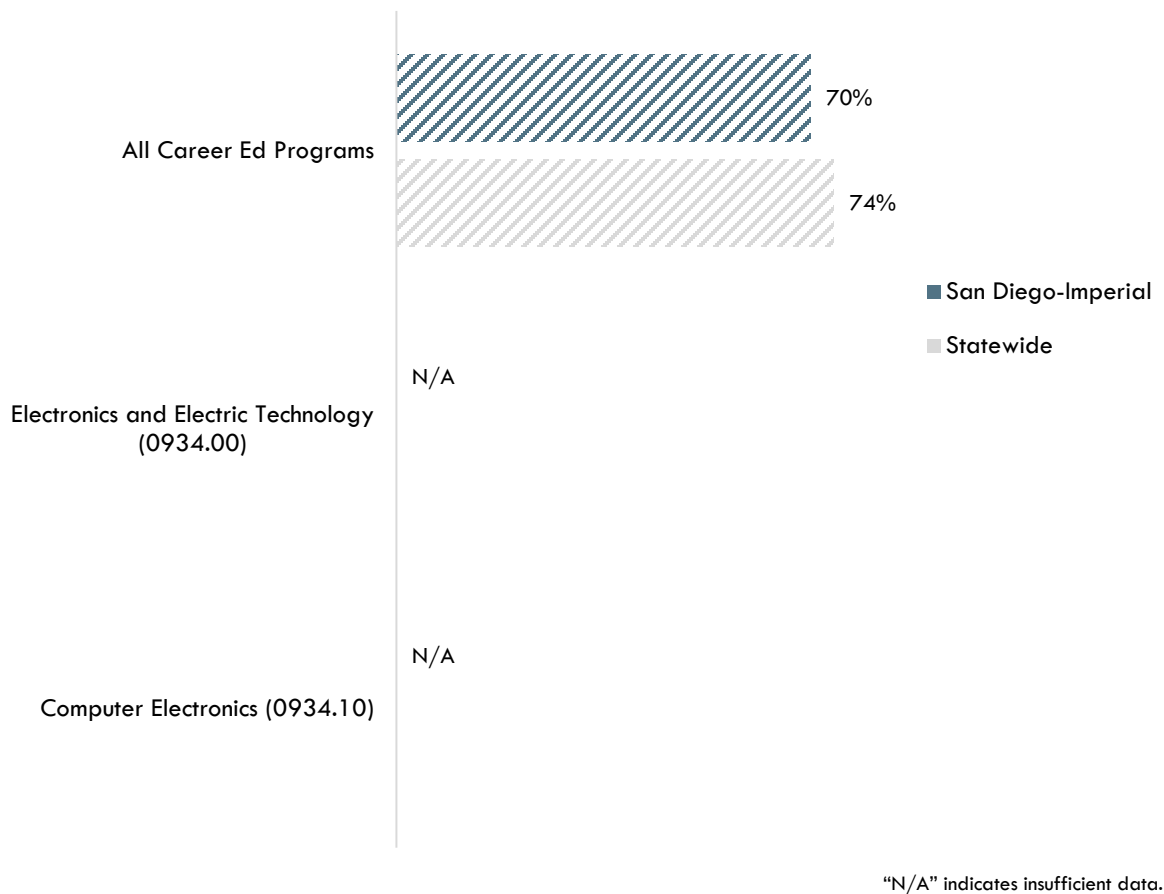
“N/A” indicates insufficient data.

¹⁹ California Community Colleges DataVista. datavista.cccco.edu

²⁰ Most recent year with available data is Program Year 2023–24. The measure reports the percentage of completers and skills builders who exited and attained a living wage.

DataVista outcomes for employment in a job closely related to the field of study were unavailable for Electronics and Electric Technology (TOP 0934.00). Outcomes were also unavailable for Computer Electronics (TOP 0934.10). The comparable rates for all Career Education programs were 70% in the San Diego-Imperial region and 74% statewide (Exhibit 11).²¹

Exhibit 11: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2022-23²²



²¹ California Community Colleges DataVista. datavista.cccco.edu

²² Most recent year with available data is Program Year 2022–23. The measure reports the percentage of CTE Outcomes Survey respondents employed in the same or a similar field as their program of study.

Employers

Between January 1, 2023 and December 31, 2025, the top employers in San Diego County for *Computer Electronics Occupations* included [Apple](#), [Simventions](#), [Northrop Grumman](#), [Booz Allen Hamilton](#), and [Accenture](#), based on online job postings (Exhibit 12).

Exhibit 12: Top Employers for Computer Electronics Occupations in San Diego County²³

Top Employers	
• Apple	• General Atomics
• Simventions	• Leidos
• Northrop Grumman	• Qualcomm
• Booz Allen Hamilton	• SAIC
• Accenture	• ServiceNow

Skills

Exhibit 13 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2023 and December 31, 2025.

Exhibit 13: Top Skills for Computer Electronics Occupations in San Diego County²⁴

Specialized Skills	Soft Skills	Software Skills
• Computer Science	• Communication	• Python
• Systems Engineering	• Management	• Linux
• Cyber Security	• Leadership	• Amazon Web Services
• Project Management	• Operations	
• Agile Methodology	• Problem Solving	
• Python	• Troubleshooting	
• Automation	• Planning	
• Linux	• Information Technology	
• Information Systems	• Innovation	
• Software Development	• Presentations	

²³ Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025.

²⁴ Lightcast Q3 2026; Job Posting Analytics, January 2023 through December 2025. Skills must populate in at least 10% of job postings to be listed.

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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 California Community Colleges Centers of Excellence (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.