










Computer Aided Woodworking Occupations

Labor Market Analysis: San Diego County

November 2025

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL(S) OF EDUCATION
 Proceed with Caution	 	 	<input type="checkbox"/> Doctorate Degree <input type="checkbox"/> Master's Degree <input type="checkbox"/> Bachelor's Degree <input type="checkbox"/> Associate Degree <input checked="" type="checkbox"/> Some College or Certificate <input checked="" 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	
 	<p>LOW</p> 	<p>LOW</p> 	

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 Aided Woodworking Occupations* include “Computer Numerically Controlled Tool Operators,” “Computer Numerically Controlled Tool Programmers,” “Sawing Machine Setters, Operators, and Tenders, Wood,” and “Woodworking Machine Setters, Operators, and Tenders, Except Sawing.” According to available data, *Computer Aided Woodworking Occupations* in San Diego County have a labor market demand of 194 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and two institutions supply 34 awards for these occupations. On average, entry-level wages are below the living wage. This brief recommends to proceed with caution developing a new program and supports a program modification because 1) there is a supply gap in San Diego County and 2) on average, these occupations’ entry-level wages are below 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:

- **Computer Numerically Controlled Tool Operators (SOC 51-9161):** Operate computer-controlled tools, machines, or robots to machine or process parts, tools, or other work pieces made of metal, plastic, wood, stone, or other materials. May also set up and maintain equipment.
- **Computer Numerically Controlled Tool Programmers (SOC 51-9162):** Develop programs to control machining or processing of materials by automatic machine tools, equipment, or systems. May also set up, operate, or maintain equipment.
- **Sawing Machine Setters, Operators, and Tenders, Wood (SOC 51-7041):** Set up, operate, or tend wood sawing machines. May operate computer numerically controlled (CNC) equipment. Includes lead sawyers.
- **Woodworking Machine Setters, Operators, and Tenders, Except Sawing (SOC 51-7042):** Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines. May operate computer numerically controlled (CNC) equipment.

For the purpose of this report, these occupations are referred to as *Computer Aided Woodworking 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 2024 and 2029, businesses in San Diego County will need to hire 194 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 Numerically Controlled Tool Operators, which are projected to have the most annual job openings with 145 openings each year between 2024 and 2029.

Exhibit 1: Number of Jobs for Computer Aided Woodworking Occupations (2024-2029)²

Occupational Title	2024 Jobs	2029 Jobs	2024 - 2029 Net Jobs Change	2024 - 2029 % Net Jobs Change	Annual Job Openings (Demand)
Computer Numerically Controlled Tool Operators	1,566	1,514	-52	-3%	145
Computer Numerically Controlled Tool Programmers	234	251	17	7%	26
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	148	144	-4	-3%	16
Sawing Machine Setters, Operators, and Tenders, Wood	65	66	1	1%	7
Total	2,013	1,975	-38	-2%	194

Earnings

According to traditional³ labor market information (LMI), entry-level hourly earnings for *Computer Aided Woodworking Occupations* range from \$18.37 to \$31.83 (Exhibit 2).

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

Occupational Title	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Computer Numerically Controlled Tool Programmers	\$31.83	\$38.35	\$46.61
Computer Numerically Controlled Tool Operators	\$22.07	\$25.91	\$30.65
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	\$18.65	\$22.26	\$23.85
Sawing Machine Setters, Operators, and Tenders, Wood	\$18.37	\$21.72	\$25.91

² Lightcast 2025.04; 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 2025.04; QCEW, Non-QCEW, Self-Employed.

On average, the entry-level hourly earnings for employed *Computer Aided Woodworking Occupations* are \$22.73—or \$46,823.80 annual salary⁵; this is less than the living wage for a single adult in San Diego County, which is \$26.01 per hour (

Exhibit 3).⁶

Exhibit 3: Hourly Earnings⁷ for Computer Aided Woodworking Occupations in San Diego County⁸



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

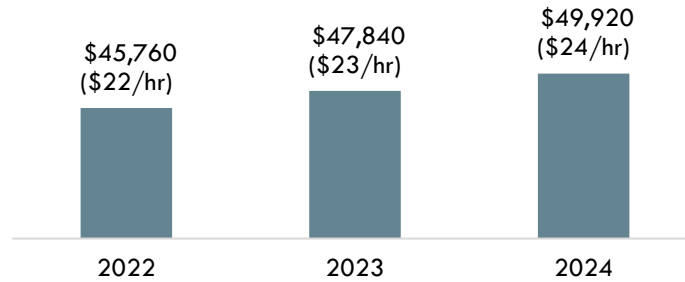
⁶ Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. selfsufficiencystandard.org/California.

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 2025.04; QCEW, Non-QCEW, Self-Employed.

In online job postings, however, employers advertised between \$22 to \$24 per hour between January 1, 2022 and December 30, 2024 for *Computer Aided Woodworking Occupations* in San Diego County (Exhibit 4).⁹ This indicates that employer-advertised wages have remained relatively stable.

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



Expected Level of Education

According to traditional LMI (data reported to EDD and BLS), *Computer Aided Woodworking Occupations* have a national educational attainment ranging from a [high school diploma or equivalent](#) to a [postsecondary non-degree award](#) (Exhibit 5).¹⁰

Exhibit 5: National Educational Attainment for *Computer Aided Woodworking Occupations*¹¹

Occupational Title	Typical Entry-Level Education
Computer Numerically Controlled Tool Programmers	Postsecondary non-degree award
Computer Numerically Controlled Tool Operators	High school diploma or equivalent
Sawing Machine Setters, Operators, and Tenders, Wood	High school diploma or equivalent
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	High school diploma or equivalent

⁹ Lightcast 2025.04; "Job Posting Analytics." 2022-2024.

¹⁰ Lightcast 2025.04; QCEW, Non-QCEW, Self-Employed.

¹¹ Lightcast 2025.04; QCEW, Non-QCEW, Self-Employed.

Similarly, online job postings between January 1, 2022 and December 31, 2024 in San Diego County had a high school diploma or equivalent as the most requested educational requirement for *Computer Aided Woodworking Occupations*; however, employers also expected the following certifications (Exhibit 6).¹²

Exhibit 6: Top Certifications for Computer Aided Woodworking Occupations in San Diego County in Online Job Postings (2022-2024)¹³

1. Secret Clearance
2. Valid Driver's License
3. Security Clearance
4. Forklift Certification
5. Six Sigma 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 three TOP codes and four CIP codes related to *Computer Aided Woodworking Occupations* (Exhibit 7).

Exhibit 7: Related TOP and CIP Codes for Computer Aided Woodworking Occupations¹⁴

TOP or CIP Code	TOP or CIP Program Title
TOP 0952.50	Mill and Cabinet Work
TOP 0956.30	Machining and Machine Tools
TOP 0956.90	Digital Fabrication Technology
CIP 48.0503	Machine Shop Technology/Assistant
CIP 48.0510	Computer Numerically Controlled (CNC) Machinist Technology/CNC Machinist
CIP 48.0701	Woodworking, General
CIP 48.0703	Cabinetmaking and Millwork

¹² Lightcast 2025.04; "Job Posting Analytics." 2022-2024.

¹³ Lightcast 2025.04; "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, two community colleges supply the region with awards for these occupations: Palomar College and San Diego City College. According to CIP data, no non-community-college institution supplies the region with awards (

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 PY22-24)
0952.50	Mill and Cabinet Work	25	0	25
	Palomar	25	0	
	• Associate degree	6	0	
	• Certificate 16 < 30 units	10	0	
	• Certificate 8 < 16 units	9	0	
0956.30	Machining and Machine Tools	9	0	9
	Palomar	3	0	
	• Associate degree	1	0	
	• Certificate 16 < 30 units	1	0	
	• Certificate 8 < 16 units	1	0	
	San Diego City	6	0	
	• Associate degree	2	0	
	• Certificate 30 < 60 units	2	0	
	• Certificate 16 < 30 units	2	0	
			Total	34

Demand vs. Supply

Comparing labor demand with labor supply¹⁵ suggests that there is a **supply gap** for these occupations in San Diego County, with **194** annual openings and **34** awards. Comparatively, there are **2,723** annual openings in California and **471** awards, suggesting that there is a **supply gap** 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	194	34	160
California	2,723	471	2,252

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.

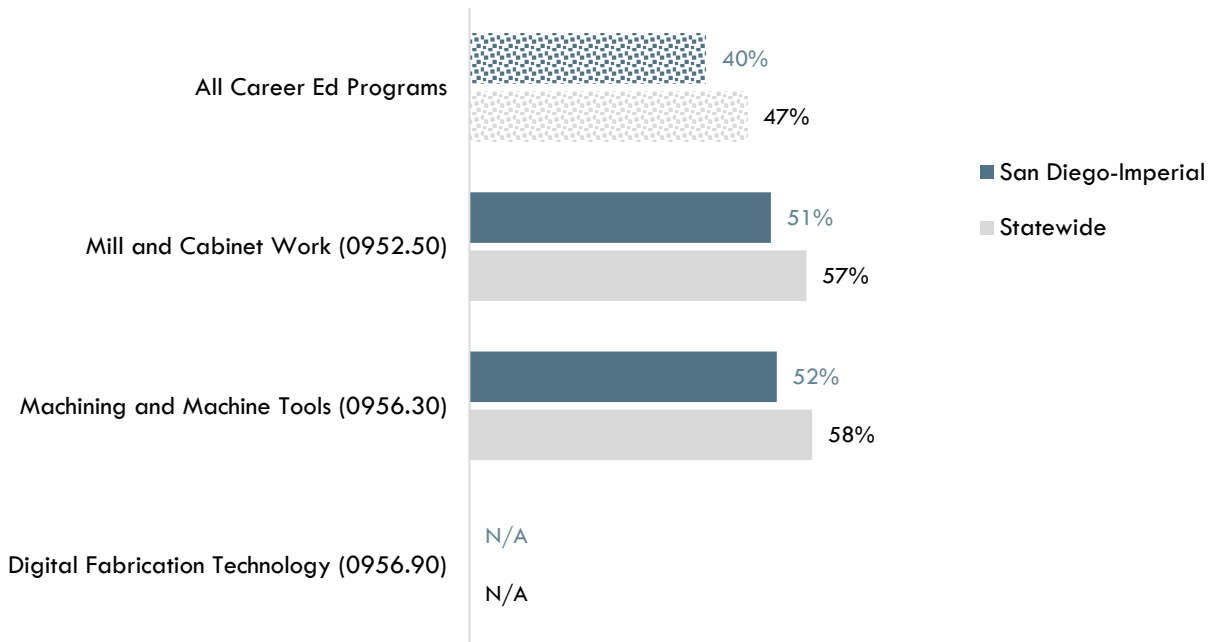
¹⁵ Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. Lightcast uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

¹⁶ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/our-resources.

Student Outcomes and Regional Comparisons

According to the California Community Colleges DataVista, 51 to 52% of students in the San Diego-Imperial region earned a living wage after completing a program related to *Computer Aided Woodworking Occupations*, compared to 57 to 58% statewide and 47% 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, PY2022-23¹⁸



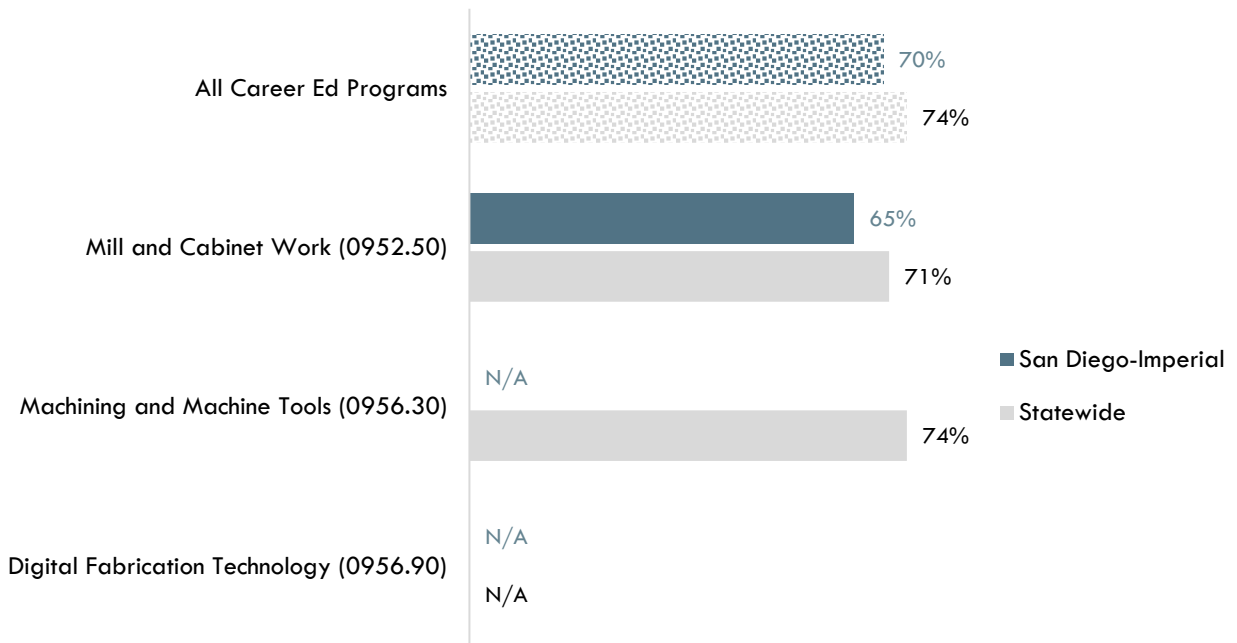
"N/A" indicates insufficient data

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, 65% of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a program related to *Computer Aided Woodworking Occupations*, compared to 71 to 74% statewide and 47% 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, PY2021-22²⁰



"N/A" indicates insufficient data

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 *Computer Aided Woodworking Occupations* were [Aerotek](#), [Volt](#), [General Atomics](#), [Express Employment Professionals](#), and [Randstad](#) based on online job postings (Exhibit 12).

Exhibit 12: Top Employers for Computer Aided Woodworking Occupations in San Diego County²¹

Top Employers	
<ul style="list-style-type: none"> • Aerotek • Volt • General Atomics • Express Employment Professionals • Randstad 	<ul style="list-style-type: none"> • 5Th Axis • AtWork Group • Adecco • Carlisle Interconnect Technologies • Moore & Associates

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 Computer Aided Woodworking Occupations in San Diego County²²

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Computer Numerical Control • Machining • CNC Machining • Mills • Calipers • Lathes • Tooling • Machine Operation • Blueprinting • CNC Milling • Deburring • Micrometer • Drilling • Cutting Tool • Machinery 	<ul style="list-style-type: none"> • Operations • Detail Oriented • Communication • Troubleshooting • Lifting Ability • Mathematics • English Language • Problem Solving • Management • Multitasking • Computer Literacy • Quality Control • Writing • Customer Service • Interpersonal Communications 	<ul style="list-style-type: none"> • Mastercam • SolidWorks

²¹ Lightcast 2025.04; "Job Posting Analytics." 2022-2024.

²² Lightcast 2025.04; "Job Posting Analytics." 2022-2024.

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