










Mechanical Drafters

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	 	 	<input type="checkbox"/> Doctorate Degree <input type="checkbox"/> Master's Degree <input type="checkbox"/> Bachelor's Degree <input checked="" 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	
 	MEDIUM 	LOW 	

The San Diego & Imperial Center of Excellence (COE) developed this brief to assist the region's community colleges with strategic planning and program development. According to available data, *Mechanical Drafters* in San Diego County have a labor market demand of 36 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and six institutions supply 72 awards for this occupation. Entry-level wages are above the living wage. This brief recommends that the colleges do not proceed with developing a new program but supports a program modification for this occupation because although 1) entry-level wages are above the living wage, 2) there is an estimated oversupply for this occupation.

Introduction

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

Mechanical Drafters (SOC 17-3013): Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.

Sample reported job titles include:

- Mechanical Designer
- Design Drafter
- Tool Designer
- Drafting Technician
- Tool Design Drafter
- Piping Designer
- Detail Drafter
- CAD Operator

Projected Occupational Demand

Between 2023 and 2028, *Mechanical Drafters* are projected to decrease by **63** net jobs or **13%** (Exhibit 1). Employers in San Diego County will need to hire **36** workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

Exhibit 1: Number of Jobs for Mechanical Drafters (2023-2028)²

Occupational Title	2023 Jobs	2028 Jobs	2023 - 2028 Net Jobs Change	2023 - 2028 % Net Jobs Change	Annual Job Openings (Demand)
Mechanical Drafters	489	426	-63	-13%	36

Earnings

According to traditional³ labor market information (LMI), entry-level hourly earnings for *Mechanical Drafters* were **\$31.90**—or **\$66,352** annual salary⁴; this is more than the living wage for a single adult in San Diego County, which is **\$26.01** per hour (Exhibit 2).⁵

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/>.

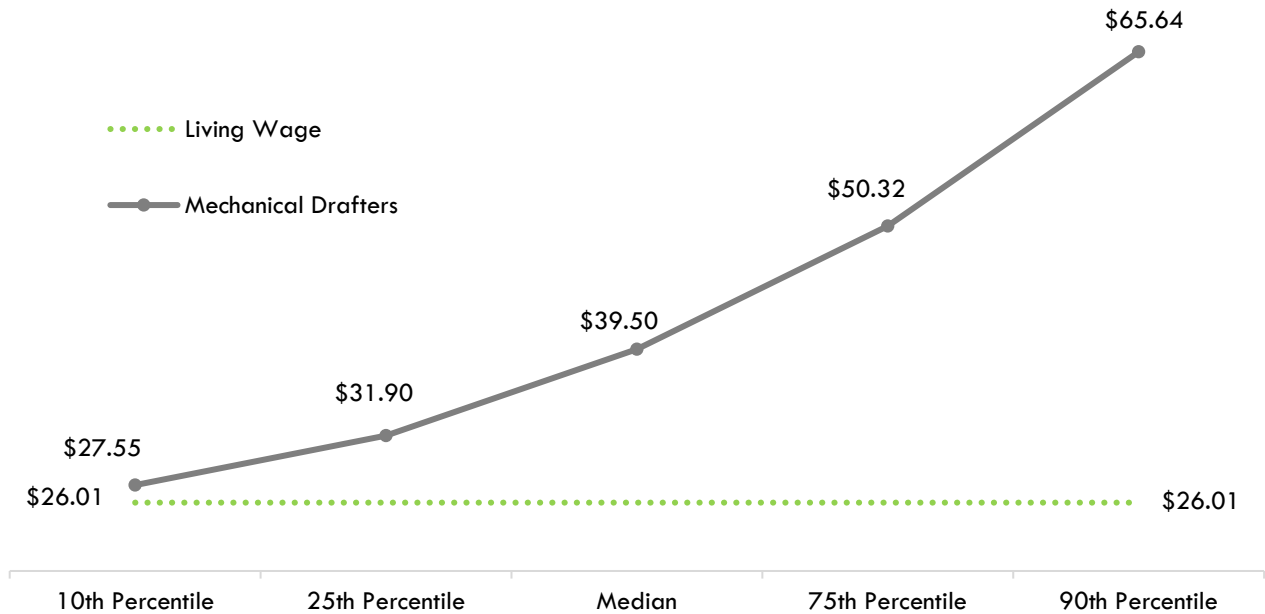
² Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.

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

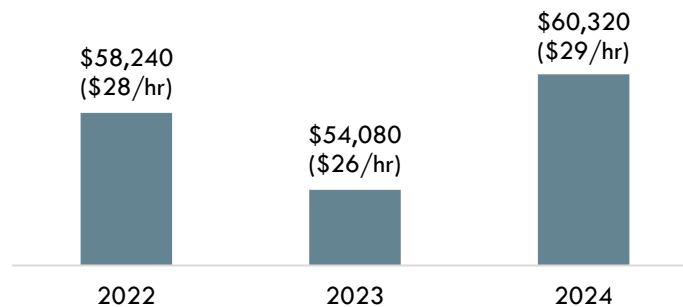
⁵ Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. selfsufficiencystandard.org/California.

Exhibit 2: Hourly Earnings⁶ for Mechanical Drafters in San Diego County⁷



In online job postings, employers advertised between \$28 to \$29 per hour between January 1, 2022 and December 30, 2024 for *Mechanical Drafters* in San Diego County (Exhibit 3).⁸ This suggests that employers in recent years have maintained wages in line with labor market information.

**Exhibit 3: Entry-Level Advertised Salaries in Online Job Postings for
Mechanical Drafters in San Diego County (2022-2024)***



*Hourly wages are rounded to the nearest dollar amount.

⁶ 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.

⁷ Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.

⁸ Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

Expected Level of Education

According to traditional LMI (data reported to EDD and BLS), *Mechanical Drafters* have a national educational attainment of an [associate degree](#) (Exhibit 4).⁹

Exhibit 4: National Educational Attainment for *Mechanical Drafters*¹⁰

Occupational Title	Typical Entry-Level Education
Mechanical Drafters	Associate degree

Similarly, online job postings between January 1, 2022 and December 31, 2024 in San Diego County had an [associate degree](#) as the most requested educational requirement for *Mechanical Drafters*; however, employers also expected the following certifications (Exhibit 5).¹¹

**Exhibit 5: Top Certifications for *Mechanical Drafters*
in San Diego County in Online Job Postings (2022-2024)**¹²

1. Secret Clearance
2. Security Clearance
3. Confidential Clearance

⁹ Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.

¹⁰ Lightcast 2025.02; QCEW, Non-QCEW, Self-Employed.

¹¹ Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

¹² Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

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 **four** CIP codes related to *Mechanical Drafters* (Exhibit 6).

Exhibit 6: Related TOP and CIP Codes for Mechanical Drafters¹³

TOP or CIP Code	TOP or CIP Program Title
TOP 0953.00	Drafting Technology
TOP 0953.40	Mechanical Drafting
CIP 15.0805	Mechanical Engineering/Mechanical Technology/Technician
CIP 15.1301	Drafting and Design Technology/Technician, General
CIP 15.1302	CAD/CADD Drafting and/or Design Technology/Technician
CIP 15.1306	Mechanical Drafting and Mechanical Drafting CAD/CADD

According to TOP data, **five** community colleges supply the region with awards for these occupations: Cuyamaca College, MiraCosta College, Palomar College, San Diego City College, and Southwestern. According to CIP data, **one** non-community-college institution supplies the region with awards, Escondido Adult School (Exhibit 7).

Exhibit 7: 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)
0953.00	Drafting Technology	47	0	47
	MiraCosta	16	0	
	• Associate degree	5	0	
	• Certificate 30 < 60 units	1	0	
	• Certificate 16 < 30 units	5	0	
	• Certificate 6 < 18 units	5	0	

¹³ This brief uses a conservative estimate of program supply and only calculates awards from the TOP code listed in Exhibit 6.

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)
	Palomar	24	0	
	• Associate degree	6	0	
	• Certificate 16 < 30 units	10	0	
	• Certificate 8 < 16 units	8	0	
	San Diego City	0	0	
	• Certificate 16 < 30 units	0	0	
	Southwestern	7	0	
	• Associate degree	4	0	
	• Certificate 16 < 30 units	2	0	
	• Certificate 6 < 18 units	1	0	
0953.40	Mechanical Drafting	18	0	18
	Cuyamaca	5	0	
	• Associate degree	2	0	
	• Certificate 16 < 30 units	3	0	
	MiraCosta	5	0	
	• Associate degree	2	0	
	• Certificate 16 < 30 units	2	0	
	• Certificate 6 < 18 units	1	0	
	Palomar	8	0	
	• Certificate 8 < 16 units	8	0	
15.1302	CAD/CADD Drafting and/or Design Technology/Technician	0	7	7
	Escondido Adult School	0	7	
	• Certificate >1 year	0	7	
			Total	72

Demand vs. Supply

Comparing labor demand with labor supply¹⁴ suggests that there is an **oversupply** for this occupation in San Diego County, with **36** annual openings and **72** awards. Comparatively, there are **323** annual openings in California and **682** awards, suggesting that there is an **oversupply** across the state (Exhibit 8).¹⁵

Exhibit 8: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply (Annual Awards)	Supply Gap or Oversupply
San Diego	36	72	-36
California	323	682	-359

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.

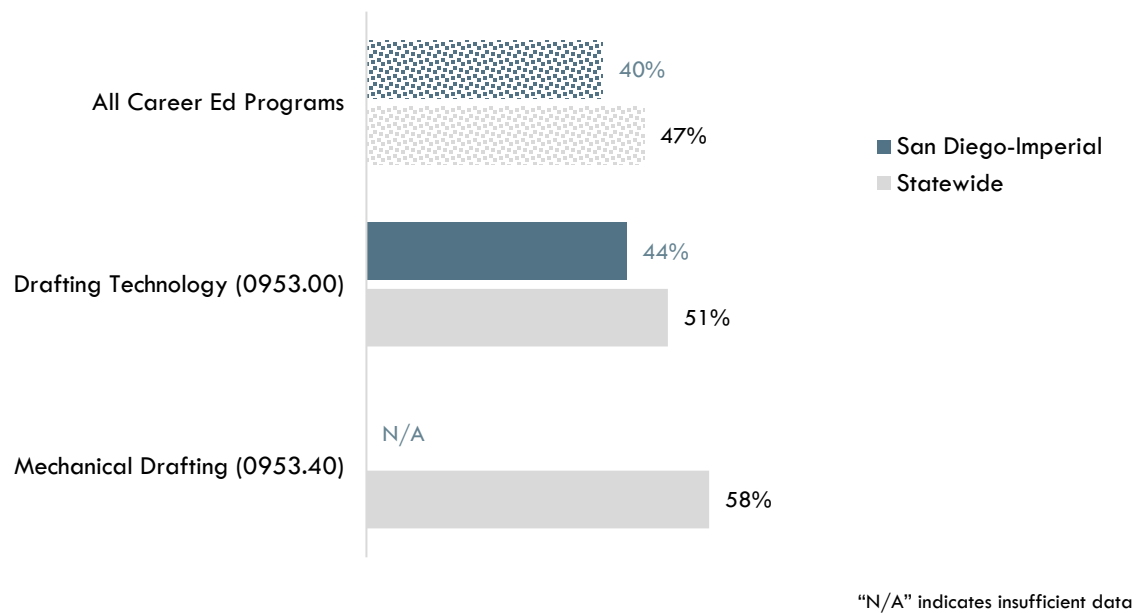
¹⁴ Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. Lightcast uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

¹⁵ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/our-resources.

Student Outcomes and Regional Comparisons

According to the California Community Colleges DataVista, 44% of students in the San Diego-Imperial region earned a living wage after completing a program related to *Mechanical Drafters*, compared to 51 to 58% statewide and 47% of students in Career Education programs in general across the state (Exhibit 9).¹⁶

Exhibit 9: Percentage of Students Who Earned a Living Wage by Program, PY2022-23¹⁷

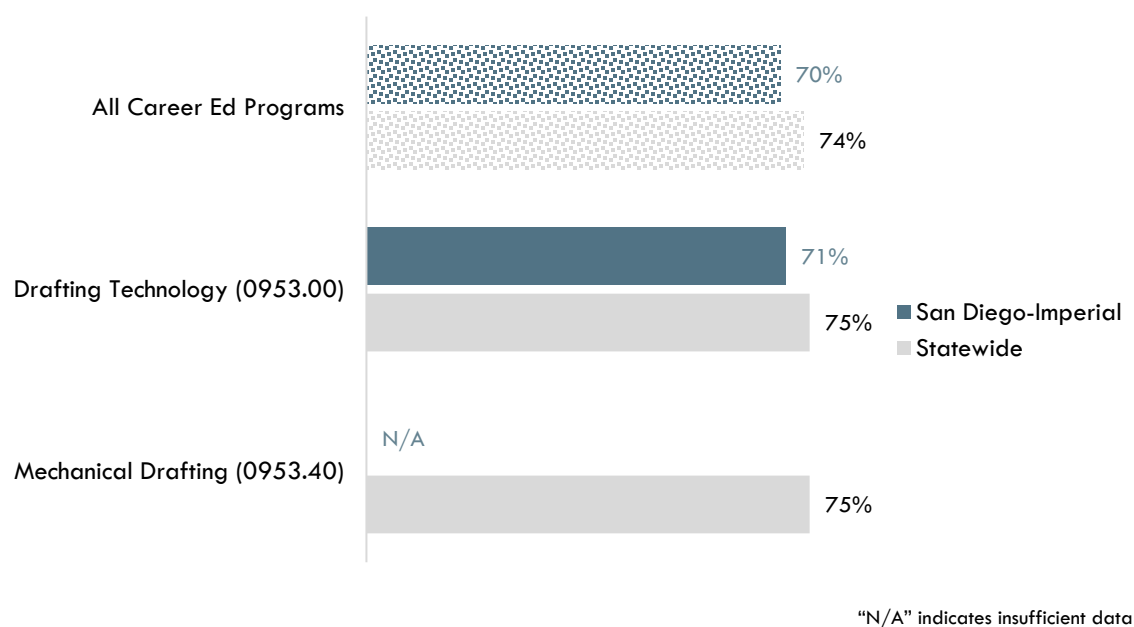


¹⁶ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹⁷ 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, 71% of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a program related to *Mechanical Drafters*, compared to 75% statewide and 74% of students in Career Education programs in general across the state (Exhibit 10).¹⁸

Exhibit 10: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2021-22¹⁹



¹⁸ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹⁹ 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 *Mechanical Drafters* were [Leidos](#), [Stone Peak Recruiting](#), [EMCOR Group](#), [CDM Smith](#), and [Fluidra North America](#) based on online job postings (Exhibit 11).

Exhibit 11: Top Employers for *Mechanical Drafters* in San Diego County²⁰

Top Employers	
<ul style="list-style-type: none">• Leidos• Stone Peak Recruiting• EMCOR Group• CDM Smith• Fluidra North America	<ul style="list-style-type: none">• PEAK Technical Staffing USA• RQ Construction• Zodiac Pool Systems• Ata Engineering• General Atomics

Skills

Exhibit 12 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2022 and December 31, 2024.

Exhibit 12: Top Skills for *Mechanical Drafters* in San Diego County²¹

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none">• Computer-Aided Design• 3D Modeling• Mechanical Design• Building Information Modeling• Technical Drawing• Project Management• Valves• Mechanical Drawings• Architectural Drawing• Construction• Mechanical Systems• Geometric Dimensioning And Tolerancing• Mechanical Engineering• Sheet Metal• Product Data Management	<ul style="list-style-type: none">• Communication• Detail Oriented• Organizational Skills• Management• Writing• Problem Solving• Quality Control• Coordinating• Microsoft Word• Time Management• Computer Literacy• Quality Assurance• Self-Starter• Interpersonal Communications• Collaboration	<ul style="list-style-type: none">• AutoCAD• SolidWorks• Autodesk Revit• Autodesk Navisworks• Navisworks• Microsoft Office• Microsoft Excel• Microsoft Word

²⁰ Lightcast 2025.02; "Job Posting Analytics." 2022-2024.

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

Prepared by:

Tina Ngo Bartel, Executive Director (tngobartel@miracosta.edu)

Christine Timbol Larson, Associate Director (ctimbollarson@miracosta.edu)

John Edwards, Research Analyst (jedwards@miracosta.edu)

San Diego & Imperial Center of Excellence



CENTER OF EXCELLENCE
SAN DIEGO & IMPERIAL

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.