










Automotive Service Technicians and Mechanics

Labor Market Analysis: San Diego County

February 2024

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL 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 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	
 	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. According to available data, *Automotive Service Technicians and Mechanics* in San Diego County have a labor market demand of 581 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and seven institutions supply 241 for-credit¹ awards for this occupation, suggesting that there is a supply gap in the labor market. Employers historically reported to the California Employment Development Department (EDD) and U.S. Bureau of Labor Statistics (BLS) that *Automotive Service Technicians and Mechanics* earned entry-level earnings of \$16.78 per hour, which was below the living wage in San Diego County. However, recent online job postings (2021-2023) show earnings between \$24 to \$30 per hour, suggesting that employers are increasing wages for this profession. This brief recommends proceeding with caution when developing a new program because while entry-level wages pay above the living wage and there is a supply gap in the labor market, there is a large number of programs that exist for this profession (i.e., many competitors).

¹ Awards conferred by the San Diego College of Continuing Education were removed for maximum comparability across institutions that provided a for-credit postsecondary non-degree award (e.g., certificate).

Introduction

This report provides labor market information in San Diego County for the following occupational code in the Standard Occupational Classification (SOC)² system:

Automotive Service Technicians and Mechanics (SOC 49-3023): Diagnose, adjust, repair, or overhaul automotive vehicles. Sample reported job titles include:

- Automotive Drivability Technician
- Automotive Mechanic
- Automotive Service Technician
- Automotive Technician
- Diagnostic Technician
- Heavy Line Technician
- Mechanic
- Quick Service Technician
- Service Technician

Projected Occupational Demand

Between 2023 and 2028, *Automotive Service Technicians and Mechanics* are projected to increase by 29 net jobs or less than one percent (Exhibit 1). Employers in San Diego County will need to hire 581 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 Automotive Service Technicians and Mechanics (2023-2028)³

Occupational Title	2023 Jobs	2028 Jobs	2023 – 2028 Net Jobs Change	2023 - 2028 % Net Jobs Change	Annual Job Openings (Demand)
Automotive Service Technicians and Mechanics	6,594	6,623	29	0%	581

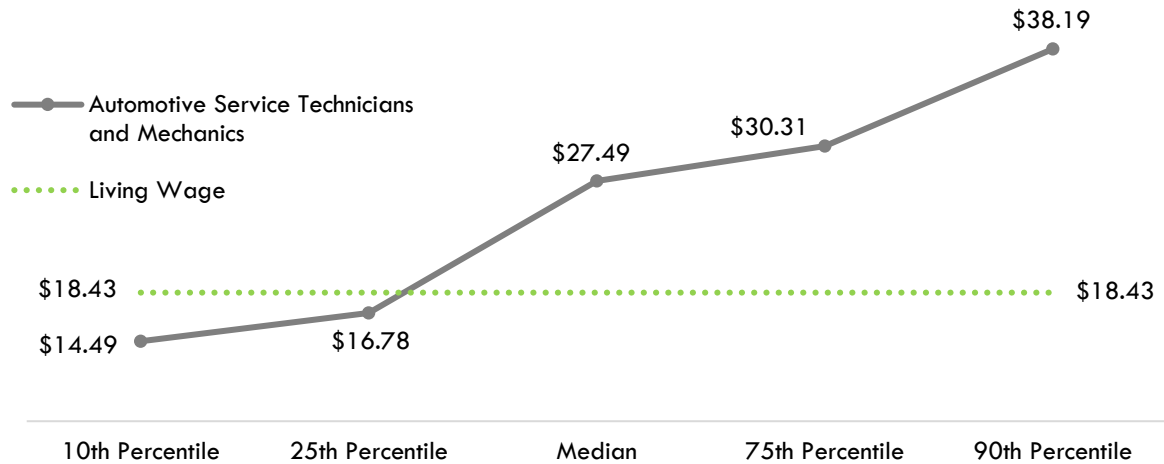
² The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc/).

³ Lightcast 2024.01; QCEW, Non-QCEW, Self-Employed.

Earnings

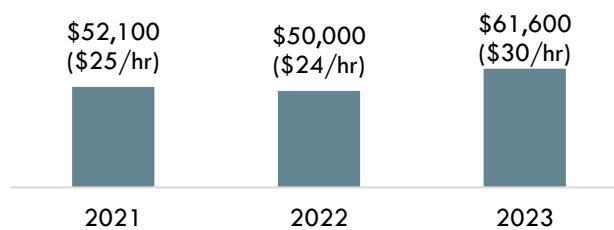
According to traditional⁴ labor market information (LMI), *Automotive Service Technicians and Mechanics* had entry-level hourly earnings of \$16.78—or \$34,902 annual salary⁵; this is less than the living wage for a single adult in San Diego County, which is \$18.43 per hour (Exhibit 2).⁶

Exhibit 2: Hourly Earnings⁷ for Automotive Service Technicians and Mechanics in San Diego County⁸



However, between January 1, 2021 and December 30, 2023, employers advertised between \$24 to \$30 per hour in online job postings for *Automotive Service Technicians and Mechanics* in San Diego County.⁹ This suggests that employers in recent years are increasing wages due to labor market forces that may not be captured by traditional LMI.

Exhibit 3: Median Advertised Salaries in Online Job Postings for Automotive Service Technicians and Mechanics in San Diego County (2021-2023)



⁴ 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.

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

⁶ "Family Needs Calculator (formerly the California Family Needs Calculator)," Insight: Center for Community Economic Development, last updated 2022. insightccd.org/family-needs-calculator.

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.

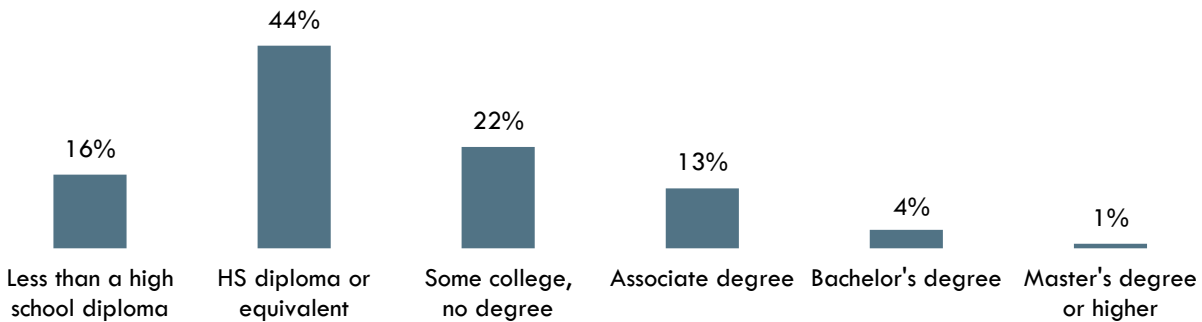
⁸ Lightcast 2024.01; QCEW, Non-QCEW, Self-Employed.

⁹ Lightcast 2024.01; "Job Posting Analytics." 2021-2023. "Lube Tech," "Quick Lube Technicians," "Vehicle Drivers," and "Auto Glass Technicians" were removed from the analysis because they require less training than *Automotive Service Technicians and Mechanics*.

Expected Level of Education

According to traditional LMI, employers typically require a **postsecondary non-degree award** as the entry-level education for *Automotive Service Technicians and Mechanics*.¹⁰ However, the California labor force employed in this occupation typically has a **high school diploma or equivalent** (Exhibit 4).

Exhibit 4: California Educational Attainment of Automotive Service Technicians and Mechanics¹¹



Similarly, online job postings between January 1, 2021 and December 31, 2023 in San Diego County had a **high school diploma or equivalent** as the most requested educational requirement for *Automotive Service Technicians and Mechanics*; however, employers also expected the following certifications (Exhibit 5).¹²

Exhibit 5: Top Certifications for Automotive Service Technicians and Mechanics in San Diego County in Online Job Postings (2021-2023)¹³

- | | |
|--|---|
| 1. Automotive Service Excellence (ASE) Certification | 9. ASE Advanced Engine Performance Certification |
| 2. CDL Class C License | 10. Cardiopulmonary Resuscitation (CPR) Certification |
| 3. Commercial Driver's License (CDL) | 11. Mobile Electronics Certified Professional |
| 4. Security Clearance | 12. Hazmat Endorsement |
| 5. OSHA Certification | 13. First Aid Certification |
| 6. CDL Class B License | 14. Tanker Endorsement |
| 7. CDL Class A License | 15. Basic Life Support (BLS) Certification |
| 8. EPA Universal Certification | |

¹⁰ Lightcast 2024.01; QCEW, Non-QCEW, Self-Employed.

¹¹ "Educational Attainment for Workers 25 Years and Older by Detailed Occupation," Bureau of Labor Statistics, last modified September 8, 2022. bls.gov/emp/tables/educational-attainment.htm.

¹² Lightcast 2024.01; "Job Posting Analytics." 2021-2023.

¹³ Lightcast 2024.01; "Job Posting Analytics." 2021-2023.

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 *Automotive Service Technicians and Mechanics* (Exhibit 6).

Exhibit 6: Related TOP and CIP Codes for Automotive Service Technicians and Mechanics¹⁴

TOP or CIP Code	TOP or CIP Program Title
TOP 0948.00	Automotive Technology
TOP 0948.40	Alternative Fuels and Advanced Transportation Technology
CIP 15.0803	Automotive Engineering Technology/Technician
CIP 47.0604	Automobile/Automotive Mechanics Technology/Technician
CIP 47.0612	Vehicle Emissions Inspection and Maintenance Technology/Technician
CIP 47.0614	Alternative Fuel Vehicle Technology/Technician

According to TOP data, six community colleges supply the region with awards for these occupations: Cuyamaca College, MiraCosta College, Palomar College, San Diego College of Continuing Education, San Diego Miramar College, and Southwestern College. According to CIP data, two non-community-college institutions supply the region with awards: United Education Institute-Chula Vista and United Education Institute-UEI College-Oceanside (Exhibit 7).

When disaggregated by award type, however, San Diego College of Continuing Education provides non-credit awards, which is not congruent with the offerings at the other colleges. For this brief, the awards for the San Diego College of Continuing Education were removed from the calculation of program supply to ensure maximum comparability across institutions.

¹⁴ This brief uses a conservative estimate of program supply and only calculates awards from the TOP code listed in Exhibit 6.

**Exhibit 7: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions
(Program Year 2019-20 Through Program Year 2021-22 Average)**

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY19-20 to PY21-22)	Other Educational Institutions 2-Yr Annual Average Awards (PY19-20 to PY20-21)	Total Average Supply (PY19-20 to PY21-22)
0948.00	Automotive Technology	797	0	797
	Cuyamaca	12	0	
	• Associate Degree	8	0	
	• Certificate 30 < 60 units	3	0	
	• Certificate 16 < 30 units	1	0	
	MiraCosta	54	0	
	• Associate Degree	9	0	
	• Certificate 30 < 60 units	2	0	
	• Certificate 16 < 30 units	15	0	
	• Certificate 8 < 16 units	2	0	
	• Certificate 6 < 18 units	26	0	
	Palomar	22	0	
	• Associate Degree	7	0	
	• Certificate 30 < 60 units	4	0	
	• Certificate 16 < 30 units	11	0	
	San Diego Cont. Ed.	628	0	
	• Non-credit 480 < 960 hrs	29	0	
	• Non-credit 288 < 480 hrs	274	0	
	• Non-credit 144 < 192 hrs	164	0	
	• Non-credit 96 < 144 hrs	76	0	
	• Non-credit 48 < 96 hrs	85	0	

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY19-20 to PY21-22)	Other Educational Institutions 2-Yr Annual Average Awards (PY19-20 to PY20-21)	Total Average Supply (PY19-20 to PY21-22)
	San Diego Miramar	44	0	
	• Associate Degree	7	0	
	• Certificate 16 < 30 units	25	0	
	• Certificate 8 < 16 units	12	0	
	Southwestern	37	0	
	• Associate Degree	10	0	
	• Certificate 30 < 60 units	6	0	
	• Certificate 16 < 30 units	12	0	
	• Certificate 6 < 18 units	9	0	
47.0604	Automobile/Automotive Mechanics Technology/Technician	0	72	72
	United Education Institute-Chula Vista	0	65	
	• Certificates 1 < 2 years	0	65	
	United Education Institute-UEI College-Oceanside	0	7	
	• Certificates 1 < 2 years	0	7	
			Total For-credit	241
			Total Non-credit	628
			Total	869

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply¹⁵ suggests that there is a **supply gap** for this occupation in San Diego County, with **581** annual openings and **241** for-credit awards.

Comparatively, there are **7,471** annual openings in California and **2,375** awards, suggesting that there is a supply gap across the state¹⁶ (Exhibit 8).

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

	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
San Diego	581	241*	340
California	7,471	2,375*	5,096

*For-credit awards

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.

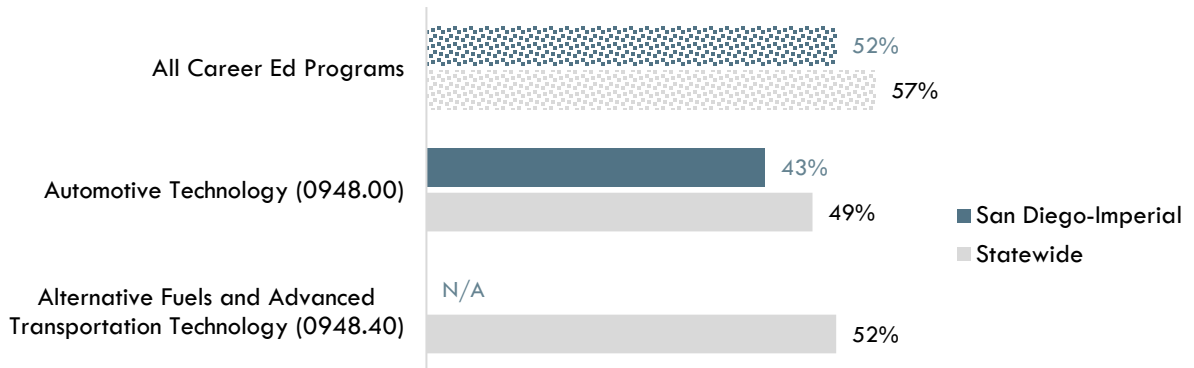
¹⁵ Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

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

Student Outcomes and Regional Comparisons

According to the California Community Colleges LaunchBoard, 43 percent of students in the San Diego-Imperial region earned a living wage after completing a program related to *Automotive Service Technicians and Mechanics*, compared to 49 to 52 percent statewide and 57 percent of students in Career Education programs in general across the state (Exhibit 9).¹⁷

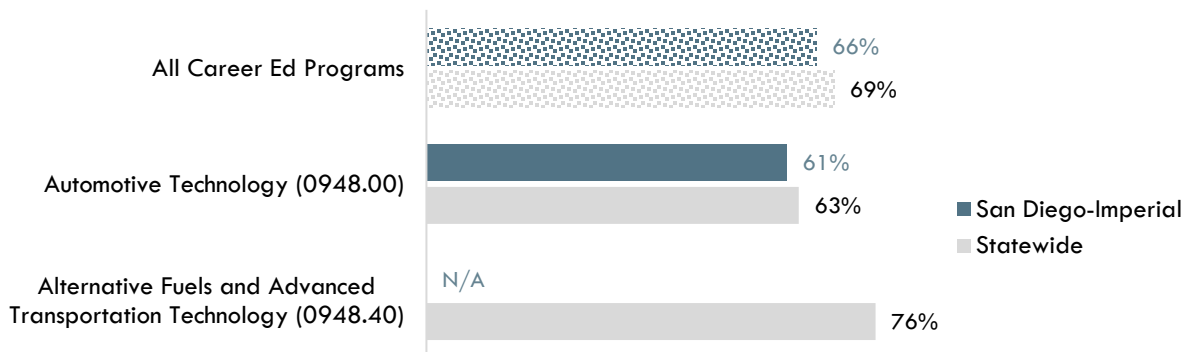
Exhibit 9: Percentage of Students Who Earned a Living Wage by Program, PY2020-21¹⁸



"N/A" indicates insufficient data

According to the California Community Colleges LaunchBoard, 61 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 *Automotive Service Technicians and Mechanics*, compared to 63 to 76 percent statewide and 69 percent of students in Career Education programs in general across the state (Exhibit 10).¹⁹

Exhibit 10: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2019-20²⁰



"N/A" indicates insufficient data

¹⁷ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹⁸ Most recent year with available data is Program Year 2020-21. Among completers and skills builders who exited, the percentage of students who attained a living wage.

¹⁹ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

²⁰ Most recent year with available data is Program Year 2019-20. 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, 2021 and December 31, 2023, the top five employers in San Diego County for *Automotive Service Technicians and Mechanics* were [Valvoline](#), [Bridgestone Corporation](#), [Pep Boys](#), [Sunroad Automotive](#), and [MV Transportation](#) based on online job postings (Exhibit 11).

Exhibit 11: Top Employers for Automotive Service Technicians and Mechanics in San Diego County²¹

Top Employers	
<ul style="list-style-type: none"> • Valvoline • Bridgestone Corporation • Pep Boys • Sunroad Automotive • MV Transportation 	<ul style="list-style-type: none"> • CarMax • Toyota Motors • Chevrolet • Transdev • Nissan

Skills

The following exhibit lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2021 and December 31, 2023.

Exhibit 12: Top Skills for Automotive Service Technicians and Mechanics in San Diego County²²

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Automotive Services • Brakes • Changing Oil • Suspension • Transmission • HVAC • Vehicle Inspection • Mechanics • Electrical Systems • Tires • Vehicle Maintenance • Oil And Gas • Automotive Technologies • Hand Tools • Occupational Safety and Health Administration 	<ul style="list-style-type: none"> • Customer Service • Communication • Good Driving Record • Management • Detail Oriented • Operations • Sales • Lifting Ability • Problem Solving • Troubleshooting • Leadership • Strong Work Ethic • Ethical Standards And Conduct • Computer Literacy • Verbal Communication Skills 	<ul style="list-style-type: none"> • Microsoft Excel • Microsoft Outlook • Microsoft PowerPoint • Disassembler • Spreadsheets • Inventory Control Systems • Microsoft Word • SAP Applications • MVS • Python • Operating Systems • Salesforce • Apple IOS • Microsoft Access • Applicant Tracking Systems

²¹ Lightcast 2024.01; "Job Posting Analytics." 2021-2023.

²² Lightcast 2024.01; "Job Posting Analytics." 2021-2023.

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