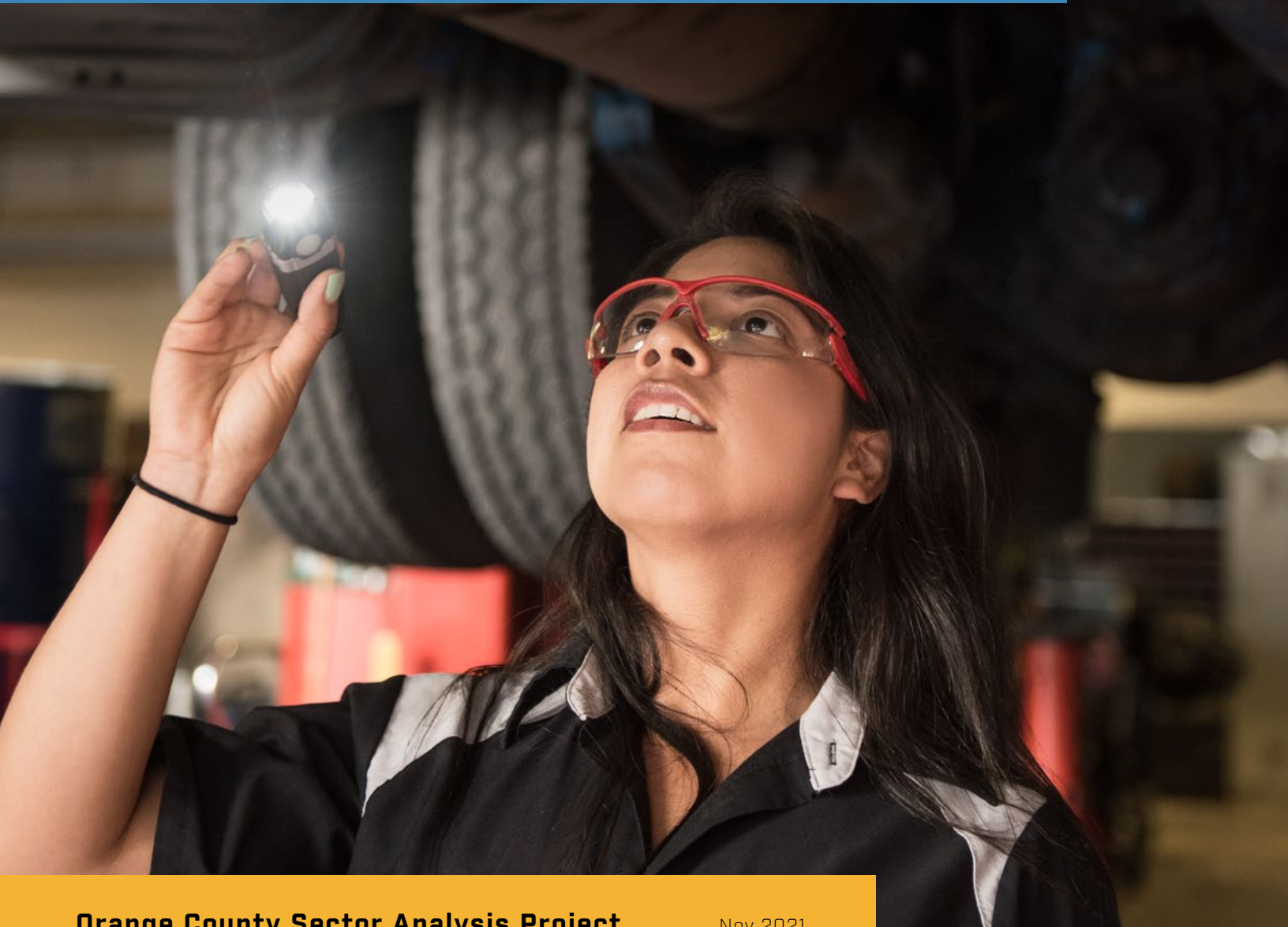


ADVANCED TRANSPORTATION & LOGISTICS



Orange County Sector Analysis Project

Nov 2021

Prepared by:
Orange County Center of Excellence
for Labor Market Research

POWERED BY



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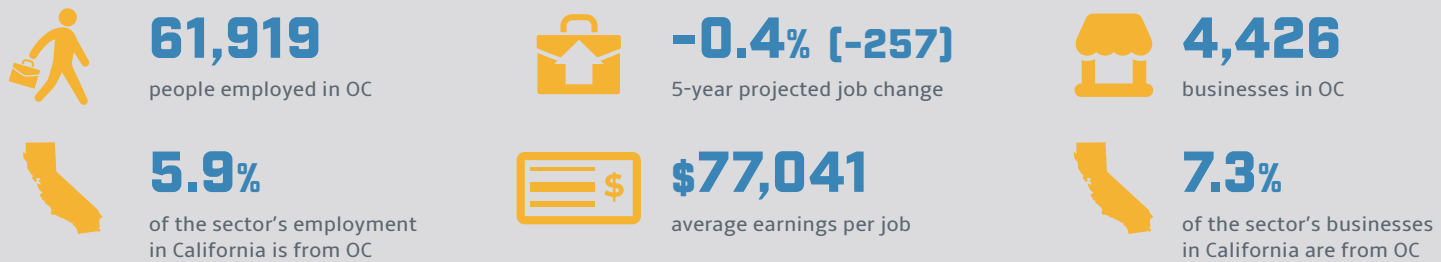
Orange County Community Colleges



SECTOR OVERVIEW

This Sector Profile highlights key points from the entire Advanced Transportation and Logistics sector in Orange County as well as from the Orange County (OC) Sector Analysis Project – a research report conducted by the OC Center of Excellence for Labor Market Information. The Advanced Transportation and Logistics sector includes industries such as road, marine, air and rail transport. Freight, transportation, delivery, and port operations are the largest industries within the Advanced Transportation sector in California. The economic effects of recent supply chain shortages due to the COVID-19 pandemic have demonstrated the local and global importance of the Advanced Transportation and Logistic workforce. Most jobs in Advanced Transportation are concentrated in Southern California. To reduce CO2 emissions and meet transportation needs of a growing global population, public transit increasingly uses new technologies such as smart ticketing systems, electric/hybrid buses, high-speed rails, and driverless shuttles. In 2019, 54% of students who completed an Advanced Transportation and Logistics community college program in the Orange County region attained the regional living wage.

Data Points



The Advanced Transportation and Logistics sector accounts for 61,919 jobs in the Orange County region and 5.9% of all Advanced Transportation and Logistics jobs in California. There are approximately 4,426 individual businesses in the region, which make up 7.3% of all the businesses for the sector in California. This sector is projected to decline by 6% (or 257 jobs) in the next five years in Orange County. The average earnings per Advanced Transportation and Logistics job are \$77,041.

Local Employers

Tricom Quest
Orange Courier Incorporated
Suburban Propane

Orange County Transportation Authority
Roy Miller Freight
Genesis Logistics



TOP MIDDLE-SKILL JOBS

Middle-skill jobs are occupations that community college students would be best prepared for after obtaining a certificate or degree. The top middle-skill jobs for the Advanced Transportation and Logistics sector are included below, along with corresponding entry-level and median hourly wages.

Middle-Skill Jobs Attainable with a Community College Education, Orange County (2020-2025)

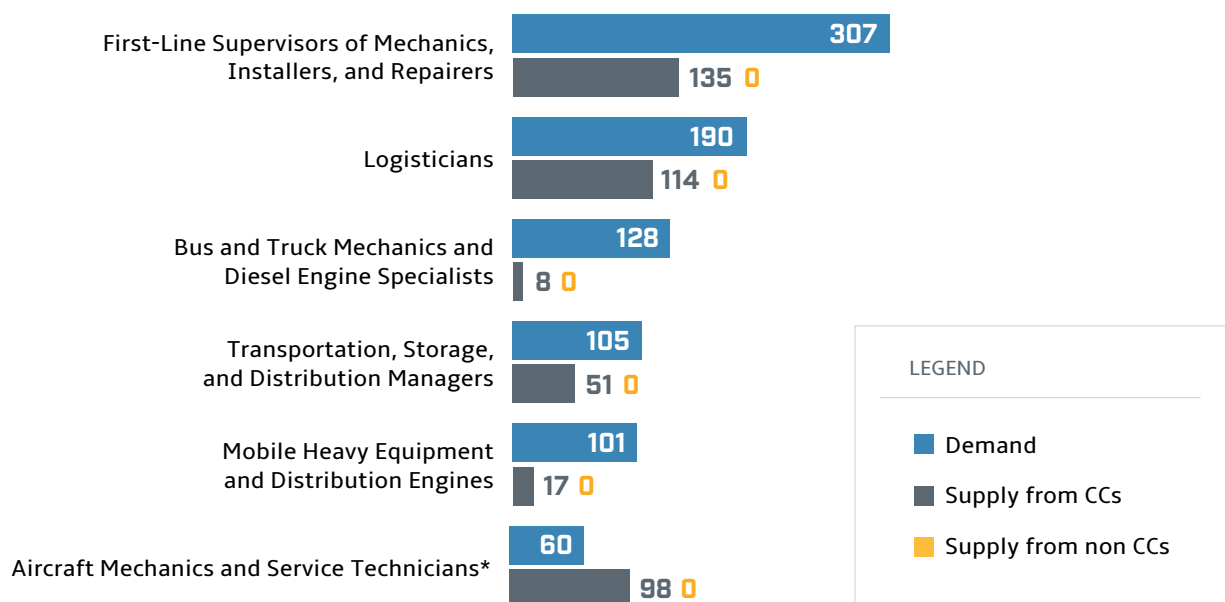
SOC Code	SOC Occupational Title	Demand Annual Openings	Entry-Level Wage 25th Percentile	Median Wage
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	307	\$32.65	\$42.44
13-1081	Logisticians	190	\$32.45	\$41.01
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	128	\$25.43	\$30.83
11-3071	Transportation, Storage, and Distribution Managers	105	\$34.46	\$47.76
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	101	\$25.23	\$32.72
49-3011	Aircraft Mechanics and Service Technicians*	60	\$26.72	\$34.74



LABOR MARKET DEMAND, PROGRAM SUPPLY, & SUPPLY GAPS

Top middle-skill jobs are defined as occupations with the most labor market demand, stable employment growth, and entry-level wages at or above the living wage, as determined by the California Family Needs Calculator. The living wage for a single adult in Orange County is currently \$20.63.¹ Comparing labor market demand with program supply suggests that all but one of the top middle-skill jobs in this sector have supply gaps in the Orange County region. Labor market demand is defined as the number of average annual job openings per year that employers expect to fill for a particular occupation. Program supply is the number of awards (e.g., degrees, certificates) from community colleges and other training providers.

Top Middle-Skill Jobs in Orange County: Labor Market Demand vs. Program Supply



(Please note: * indicates that the occupation has an oversupply of labor, ^ indicates that the occupation's demand has been met, and N/A indicates that no community college program reported awards for this occupation or no community college program is available for this occupation.)

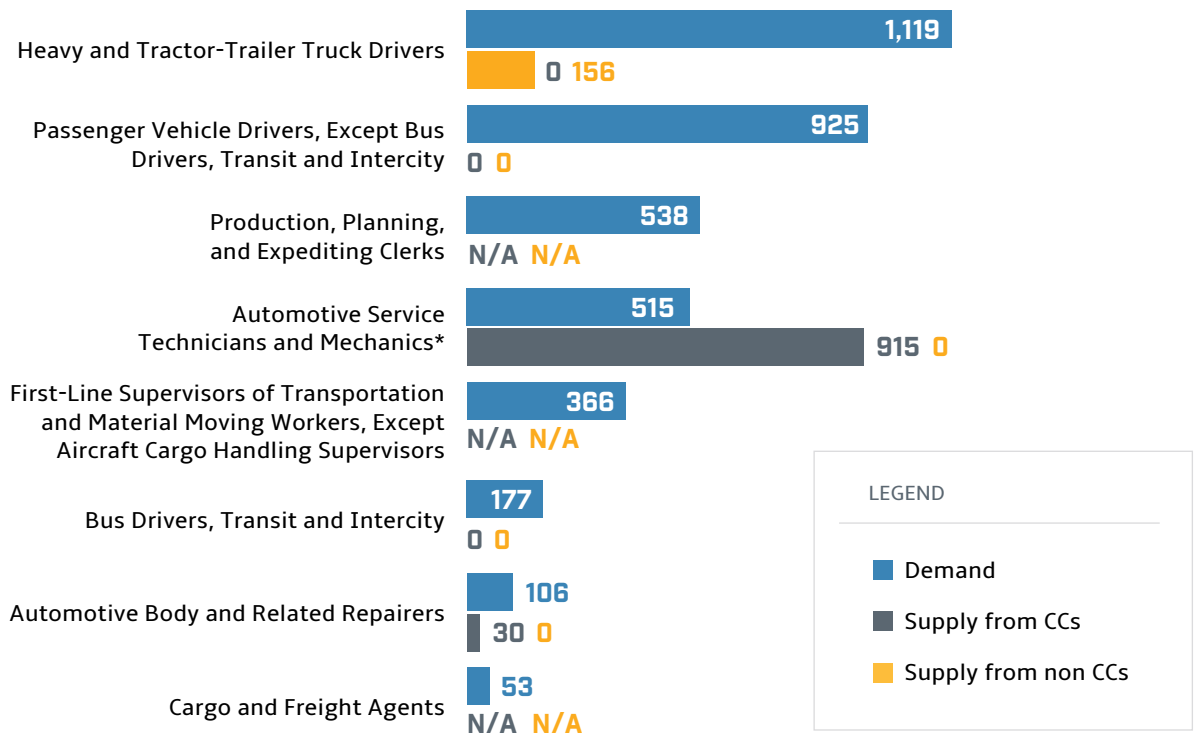


¹ The living wage as determined by the California Family Need Calculator is the hourly wage that a single adult needs to earn to meet basic needs in Orange County. <https://insightccd.org/family-needs-calculator/>

MIDDLE-SKILL JOBS WITH ENTRY-LEVEL WAGES BELOW THE REGIONAL LIVING WAGE

While it is important to understand which top middle-skill jobs have opportunities for increased program supply, it is also important to consider middle-skill occupations that have entry-level wages below the regional living wage, currently at \$20.63, but median wages near or above it. Since wages generally increase from entry-level to median earnings with additional experience and training, students could potentially earn self-sustaining wages with additional apprenticeship or work-based learning opportunities.

Middle-Skill Jobs in Orange County with Entry-Level Wages Below the Regional Living Wage



(Please note: * indicates that the occupation has an oversupply of labor, ^ indicates that the occupation's demand has been met, and N/A indicates that no community college program reported awards for this occupation or no community college program is available for this occupation.)
Please note: supply for Automotive Service Technicians and Mechanics is overstated due to the automatic conferral of low-unit, local certificates by Santa Ana College in 2017-18.

Entry-Level and Median Wages for Middle-Skill Jobs in Orange County with Entry-Level Wages Below the Regional Living Wage

SOC Code	SOC Occupational Title	Demand Annual Openings	Entry-Level Wage 25th Percentile	Median Wage Above the Living Wage
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,119	\$19.14	\$23.91
53-3058	Passenger Vehicle Drivers, Except Bus Drivers, Transit and Intercity	925	\$11.02	\$15.42
43-5061	Production, Planning, and Expediting Clerks	538	\$19.15	\$24.82
49-3023	Automotive Service Technicians and Mechanics*	515	\$17.04	\$23.94
53-1047	First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	366	\$20.46	\$26.41
53-3052	Bus Drivers, Transit and Intercity	177	\$17.41	\$22.05
49-3021	Automotive Body and Related Repairers	106	\$15.93	\$23.50
43-5011	Cargo and Freight Agents	53	\$18.55	\$23.60

KEY FINDINGS & RECOMMENDATIONS

Between July and August 2019, focus groups comprised of stakeholders from the community colleges and industry experts met to review the labor market demand and program supply for middle-skill jobs in Orange County's Priority and Emerging Sectors. The objectives of the focus groups were to identify labor market supply gaps in middle-skill jobs and provide intelligence as to how they are working to close supply gaps, as well as the challenges they encounter in their programs. The following summarizes the findings and recommendations for the Advanced Transportation and Logistics sector.



4,690

annual job openings
(labor market demand)



1,524

average annual program awards
(labor market supply)



3,166

supply gap
(awards needed to close the gap)



Key Finding



Recommendation

1

Automation could hurt the Advanced Transportation and Logistics sectors more than others: The rapid development of autonomous vehicles and the recent decision by the Los Angeles Board of Harbor Commissioners to allow the Maersk shipping company to use automated electric cargo handlers at the Port of Los Angeles highlight some ways automation could hurt Advanced Transportation and Logistics sector. Additionally, there is currently high demand for Heavy and Tractor Trailer Truck Drivers, but future demand for this occupation could be greatly affected by self-driving trucks.

Though automation will likely impact the demand for many Advanced Transportation and Logistics occupations, it could also provide opportunities to teach new skills and re-train current workers. In the case of the Port of Los Angeles, dockworkers reached an agreement that provides training for workers to repair and service automated machines. Orange County community colleges could offer similar training or re-training programs that could put workers at a lower risk of losing their job to automation.

2

Wages for Automotive Service Technicians and Mechanics could be misleading: Entry-level wages for Automotive Service Technicians and Mechanics are below the regional living wage, which is currently \$20.63. However, this occupation includes several roles and titles, including lube technicians, service technician, and automobile mechanic. While standardized occupational titles are useful for classifying, collecting, and disseminating data in general, they do not always provide a complete picture of the demand and wages for specific job titles. Proliferous positions that are typically considered entry-level and require less experience, like lube technicians, have low wages and bring the entry-level and median wages down for this occupation.

To help students better understand wage expectations and career progression, the Regional Employer Engagement Team could work with faculty members and administrators to define common career paths and job titles within occupations. This information can then be shared with counselors so that students can learn about their career options and how their earnings potential changes with additional education and experience.



Key Finding

3

New technology, automation, and the changing regulatory landscape make it difficult for faculty to define the specific training needed for some areas; keeping up with these trends can be expensive:

Due to the bureaucratic nature of the community college system, colleges are not always able to stay current with the most recent training technology, such as flight simulators. By the time colleges can adopt new technology, newer versions have often been released. Additionally, changes in flight regulations, and the potential for future regulations, for drone pilots creates uncertainty about the skills and knowledge students will need to succeed in associated occupations.



Recommendation

Faculty, administrators, and the Regional Employer Engagement Team could work with key employers to identify which training technology and platforms would be most cost effective for providing the skills and training students need to meet employers' demand for workers. This would allow colleges to focus their finite resources in areas that will be the most effective in supporting student success.

4

Knowledge, Skills, and Abilities (KSAs) for the sector have not been validated by employers:

The OC Sector Analysis Project brief examines job gaps, but does not explore the specific KSAs taught at the colleges and compare them to the labor market's demand for Advanced Transportation and Logistics KSAs.

To determine if the region's community colleges are training for the right KSAs, the Regional Employer Engagement Team should convene employers in a "regional advisory group" where employers can review program KSAs, provide feedback, and validate the KSAs' current relevance and demand in the labor market.



MORE ABOUT THE CENTERS OF EXCELLENCE

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California Community Colleges for program decision-making and resource-development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Education (CE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Orange County COE is fully funded by the Orange County Regional Strong Workforce Program allocation. The Centers aspire to be the leading source of regional workforce information and insight for California Community Colleges. More information about the Centers of Excellence is available at coeccc.net.

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Orange County Center of Excellence
for Labor Market Research

For the full report, visit Orange County at coeccc.net.

Sources

Demand data is pulled from Emsi, a software program that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS), and other government agencies.

Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Important Disclaimer

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 such as those from the Orange County Center of Excellence for Labor Market Research and Cal-PASS Plus LaunchBoard. 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 college/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.

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