

**Program Endorsement Brief: 0948.00/Automotive Technology**

**Automotive Chassis Systems**  
**Automotive Electric Vehicle Technician**  
**Automotive Engine Diagnostics Technician**  
**Automotive Engine Repair Technician**  
**Automotive Suspension Technician**  
**Automotive Technician Fundamentals**

Orange County Center of Excellence, May 2022

**Summary Analysis**

<b>Program Endorsement:</b>	<b>Endorsed:</b> All Criteria Met <input type="checkbox"/>	<b>Endorsed:</b> Some Criteria Met <input checked="" type="checkbox"/>	<b>Not Endorsed</b> <input type="checkbox"/>
<b>Program Endorsement Criteria</b>			
<b>Supply Gap:</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Living Wage:</b> (Entry-Level, 25 <sup>th</sup> )	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Education:</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Emerging Occupation(s)</b>			
	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

The Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to three middle-skill occupations: *first-line supervisors of mechanics, installers, and repairers (49-1011)*, *electronic equipment installers and repairers, motor vehicles (49-2096)*, and *automotive service technicians and mechanics (49-3023)* and two below middle-skill occupations: *glass installers and repairers (49-3022)* and *tire repairers and changers (49-3093)*. Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree.<sup>1</sup>

Although the occupations *automotive glass installers and repairers* and *tire repairers and changers* are considered below middle-skill, they are included because they align with the knowledge, skills, and abilities (KSAs) and job opportunities that students can obtain through completion of the proposed program. However, the labor market endorsement included in this report is based solely on the labor market information for the group of middle-skill automotive technology occupations. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

Based on the available data there appears to be a supply gap for these middle-skill Automotive Technology occupations in the region. Furthermore, the majority of annual openings for the

<sup>1</sup> The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor’s degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

middle-skill occupations in this report typically require a postsecondary nondegree award and between 35.7% and 47.7% of workers in the field have completed some college or an associate degree as their highest level of education. However, entry-level wages are lower than the living wage in both Los Angeles and Orange counties. **Therefore, due to some of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

#### **Demand:**

- **Supply Gap Criteria** – Over the next five years, there is projected to be **3,577 middle-skill jobs available annually** in the region due to retirements and workers leaving the field, **which is more than the 2,136 awards conferred annually** by educational institutions in the region.
- **Living Wage Criteria** – Within Orange County, **the majority (65%) of annual job openings** for the group of middle-skill Automotive Technology occupations **have entry-level wages below the county's living wage (\$20.63/hour).**<sup>2</sup>
- **Educational Criteria** – Within the LA/OC region, **64% of the annual middle-skill job openings** for occupations related to Automotive Technology **typically require a postsecondary nondegree award.**
  - Furthermore, the national-level educational attainment data indicates **between 35.7% and 47.7% of workers in the field have completed some college or an associate degree** as their highest level of education.

#### **Supply:**

- There are **16 community colleges** in the LA/OC region that issue awards related to Automotive Technology, conferring an average of **1,736 awards annually** between 2017 and 2020.
- Between 2016 and 2019, there was an average of **400 awards conferred annually** in related training programs by non-community college institutions, all of which were generated by **7 individual non-community college institutions throughout** the region.

### **Occupational Demand**

#### *Middle-Skill Occupations*

Exhibit 1 shows the five-year occupational demand projections for the group of middle-skill automotive technology occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to decrease by 2% through 2025. However, there will be nearly 3,600 job openings per year through 2025 due to retirements and workers leaving the field

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<sup>2</sup> Living wage data was pulled from California Family Needs Calculator on 5/10/2022. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/family-needs-calculator/>.

**Exhibit 1: Middle-skill occupational demand in Los Angeles and Orange Counties<sup>3</sup>**

Geography	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Los Angeles	27,276	26,490	(786)	(3%)	2,598
Orange	10,056	10,049	(8)	(0%)	979
<b>Total</b>	<b>37,332</b>	<b>36,539</b>	<b>(793)</b>	<b>(2%)</b>	<b>3,577</b>

*Below Middle-Skill Occupations*

Exhibit 2 shows the five-year occupational demand projections for the group of below middle-skill automotive technology occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to decrease by 5% through 2025. However, there will be 460 job openings per year through 2025 due to retirements and workers leaving the field

**Exhibit 2: Below middle-skill occupational demand in Los Angeles and Orange Counties**

Geography	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Los Angeles	3,047	2,913	(133)	(4%)	340
Orange	1,086	1,001	(86)	(8%)	120
<b>Total</b>	<b>4,133</b>	<b>3,914</b>	<b>(219)</b>	<b>(5%)</b>	<b>460</b>

**Wages**

The labor market endorsement in this report considers the entry-level hourly wages for the group of middle-skill Automotive Technology occupations in Orange County as they relate to the county’s living wage. Los Angeles County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

**Orange County:** The majority (65%) of annual openings for the group of middle-skill Automotive Technology occupations have entry-level wages below the living wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages are in a range between \$15.76 and \$32.52. Experienced workers can expect to earn wages between \$20.27 and \$52.97, which includes wages that are higher than and slightly below the living wage estimate. Orange County’s average wages are above the average statewide wage of \$30.09 for these occupations.

All annual openings for the group of below middle-skill Automotive Technology occupations have entry-level wages below the living wage for one adult (\$20.63 in Orange County) and California’s current minimum wage (\$14.00/hour for employers with 25 employees or less; \$15.00/hour for employers with 26 or more employees).<sup>4</sup> Typical entry-level hourly wages are in a range between \$14.17 and \$14.53. Experienced workers can expect to earn wages between \$18.17 and \$23.69, which includes wages that are higher than and lower than the living wage

<sup>3</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

<sup>4</sup>Wage data is based on data collected over the previous three years. This historical data is a “point-in-time” estimate and does not reflect recent changes in minimum wage laws. [https://www.dir.ca.gov/dlse/FAQ\\_MinimumWage.htm](https://www.dir.ca.gov/dlse/FAQ_MinimumWage.htm)

estimate. Orange County's average wages are above the average statewide wage of \$17.44 for these occupations.

**Los Angeles County:** The majority (66%) of annual openings for the group of middle-skill Automotive Technology occupations have entry-level wages below the living wage for one adult (\$18.10 in Los Angeles County) and California's current minimum wage (\$14.00/hour for employers with 25 employers or less; \$15.00/hour for employers with 26 or more employees). Typical entry-level hourly wages are in a range between \$14.28 and \$30.80. Automotive service technicians and mechanics and electronic equipment installers and repairers, motor vehicles have entry-level wages below California's current minimum wage. Experienced workers can expect to earn wages between \$19.05 and \$50.20, which are higher than the living wage estimate. Los Angeles County's average wages are below the average statewide wage of \$30.09 for these occupations.

All annual openings for the group of below middle-skill Automotive Technology occupations have entry-level wages below the living wage for one adult (\$18.10 in Los Angeles County) and California's current minimum wage (\$14.00/hour for employers with 25 employers or less; \$15.00/hour for employers with 26 or more employees). Typical entry-level hourly wages are in a range between \$12.57 and \$13.42. Experienced workers can expect to earn wages between \$17.24 and \$21.12, which includes wages that are higher and lower than the living wage estimate. Los Angeles County's average wages are below the average statewide wage of \$17.24 for these occupations.

### **Job Postings**

There were 14,949 online job postings related to the group of middle-skill Automotive Technology occupations listed in the past 12 months. The highest number of job postings were for automotive technicians, maintenance technicians, maintenance managers, service managers, and lube technicians. The top skills were repair, auto repair, customer service, scheduling, and automotive service industry knowledge. The top three employers, by number of job postings, in the region were Pep Boys, CarMax, and Goodyear.

There were 712 online job postings related to the group of below middle-skill Automotive Technology occupations listed in the past 12 months. The highest number of job postings were for tire technicians, tire service technicians, and tire and lube technicians. The top skills were repair, tire repair, cleaning, tire mounting and customer service. The top three employers, by number of job postings, in the region were America's Tire Company, Discount Tire, and Safelite AutoGlass.

### **Educational Attainment**

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for *first-line supervisors of mechanics, installers, and repairers* and *electronic equipment installers and repairers, motor vehicles* and a postsecondary nondegree award as the typical entry-level education for *automotive service technicians and mechanics*. In the LA/OC region, the majority of annual job openings (64%) typically require a postsecondary nondegree award. Furthermore, the national-level educational attainment data indicates that between 35.7% and 47.7% of workers in the field have completed some college or an associate degree as their highest level of education. Of the 51% of middle-skill Automotive Technology job postings listing a minimum education requirement in Los Angeles/Orange County, 83% (6,351) requested

high school or vocational training, 4.6% (355) requested an associate degree, and 12.4% (946) requested a bachelor’s degree or higher.

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent for as the typical entry-level education for each of the below middle-skill Automotive Technology occupations included in this report. Furthermore, the national-level educational attainment data indicates that between 25.6% and 30.2% of workers in the field have completed some college or an associate degree as their highest level of education. All below middle-skill Automotive Technology job postings listing a minimum education requirement in Los Angeles/Orange County requested high school or vocational training.

### Educational Supply

**Community College Supply**—Exhibit 3 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Diesel Technology (0947.00), Automotive Technology (0948.00), and Alternative Fuels and Advanced Transportation Technology (0948.40). The colleges with the most completions in the region are: Santa Ana, Cypress, LA Trade, and Rio Hondo. Over the past 12 months, there were six other related program recommendation requests from regional community colleges.

**Exhibit 3: Regional community college awards (certificates and degrees), 2017-2020**

TOP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
0947.00	Diesel Technology	Citrus	12	24	9	15
		LA Trade	66	35	31	44
		<b>LA Subtotal</b>	<b>78</b>	<b>59</b>	<b>40</b>	<b>59</b>
		Santa Ana	10	10	4	8
		<b>OC Subtotal</b>	<b>10</b>	<b>10</b>	<b>4</b>	<b>8</b>
<b>Supply Subtotal/Average</b>			<b>88</b>	<b>69</b>	<b>44</b>	<b>67</b>
0948.00	Automotive Technology	Cerritos	57	58	71	62
		Citrus	85	114	13	71
		Compton	21	15	1	12
		East LA	84	70	35	63
		El Camino	97	70	77	81
		LA Pierce	137	86	110	111
		LA Trade	147	157	67	124
		Long Beach	-	-	24	8
		Pasadena	40	107	125	91
		Rio Hondo	85	90	86	87
		Santa Monica	-	2	-	1
		<b>LA Subtotal</b>	<b>753</b>	<b>769</b>	<b>609</b>	<b>710</b>
		Cypress	173	362	262	266

TOP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
		Fullerton	49	26	24	33
		Golden West	37	51	55	48
		Saddleback	23	48	26	32
		Santa Ana	1,291	119	182	531
		<b>OC Subtotal</b>	<b>1,573</b>	<b>606</b>	<b>549</b>	<b>909</b>
<b>Supply Subtotal/Average</b>			<b>2,326</b>	<b>1,375</b>	<b>1,158</b>	<b>1,620</b>
0948.40	Alternative Fuels and Advanced Transportation Technology	Cerritos	-	1	-	0
		LA Trade	18	10	4	11
		Long Beach	3	7	8	6
		Rio Hondo	19	8	53	27
		<b>LA Subtotal</b>	<b>40</b>	<b>26</b>	<b>65</b>	<b>44</b>
		Saddleback	8	8	2	6
		<b>OC Subtotal</b>	<b>8</b>	<b>8</b>	<b>2</b>	<b>6</b>
<b>Supply Subtotal/Average</b>			<b>48</b>	<b>34</b>	<b>67</b>	<b>50</b>
<b>Supply Total/Average</b>			<b>2,462</b>	<b>1,478</b>	<b>1,269</b>	<b>1,736</b>

**Non-Community College Supply—** For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for Automotive Technology. Exhibit 4 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Codes: Automobile/Automotive Mechanics Technology/Technician (47.0604) and Vehicle Emissions Inspection and Maintenance Technology/Technician (47.0612). Due to different data collection periods, the most recent three-year period of available data is from 2016 to 2019. Between 2016 and 2019, four-year colleges in the region conferred an average of 400 awards annually in related training programs.

**Exhibit 4: Regional non-community college awards, 2016-2019**

CIP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
47.0604	Automobile/Automotive Mechanics Technology/Technician	Baldwin Park Adult & Community Education	10	9	13	11
		GDS Institute	5	9	-	5
		Hacienda La Puente Adult Education	46	21	9	25
		UEI College-Gardena	69	46	72	62
		United Education Institute-West Covina	-	-	32	11

CIP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		Universal Technical Institute-Southern California	245	329	277	284
<b>Supply Subtotal/Average</b>			<b>375</b>	<b>414</b>	<b>403</b>	<b>397</b>
47.0612	Vehicle Emissions Inspection and Maintenance Technology/Technician	California Career School	-	-	7	2
<b>Supply Subtotal/Average</b>			<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>
<b>Supply Total/Average</b>			<b>375</b>	<b>414</b>	<b>410</b>	<b>400</b>

**Appendix A: Occupational demand and wage data by county**

**Exhibit 5. Orange County**

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
First-Line Supervisors of Mechanics, Installers, and Repairers (49-1011)	3,739	3,781	42	1%	342	\$32.52	\$42.29	\$52.97
Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096)	304	270	(34)	(11%)	22	\$15.76	\$18.13	\$20.27
Automotive Service Technicians and Mechanics (49-3023)	6,014	5,998	(15)	(0%)	615	\$16.81	\$23.72	\$31.75
<b>Middle-Skill Total</b>	<b>10,056</b>	<b>10,049</b>	<b>(8)</b>	<b>(0%)</b>	<b>979</b>			
Automotive Glass Installers and Repairers (49-3022)	396	342	(54)	(14%)	39	\$14.17	\$18.62	\$23.69

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Tire Repairers and Changers (49-3093)	690	658	(32)	(5%)	81	\$14.53	\$15.78	\$18.51
<b>Below Middle-Skill Total</b>	<b>1,086</b>	<b>1,001</b>	<b>(86)</b>	<b>(8%)</b>	<b>120</b>			

**Exhibit 6. Los Angeles County**

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
First-Line Supervisors of Mechanics, Installers, and Repairers (49-1011)	9,753	9,721	(32)	(0%)	872	\$30.80	\$40.07	\$50.20
Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096)	702	595	(107)	(15%)	51	\$14.80	\$17.03	\$19.05
Automotive Service Technicians and Mechanics (49-3023)	16,820	16,173	(646)	(4%)	1,676	\$14.28	\$21.03	\$28.41
<b>Middle-Skill Total</b>	<b>27,276</b>	<b>26,490</b>	<b>(786)</b>	<b>(3%)</b>	<b>2,598</b>			
Automotive Glass Installers and Repairers (49-3022)	1,048	962	(86)	(8%)	105	\$12.57	\$16.59	\$21.12
Tire Repairers and Changers (49-3093)	1,999	1,951	(47)	(2%)	236	\$13.42	\$14.59	\$17.24
<b>Below Middle-Skill Total</b>	<b>3,047</b>	<b>2,913</b>	<b>(133)</b>	<b>(4%)</b>	<b>341</b>			



### Exhibit 7. Los Angeles and Orange Counties

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings
First-Line Supervisors of Mechanics, Installers, and Repairers (49-1011)	13,492	13,502	10	0%	1,214
Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096)	1,006	865	(141)	(14%)	73
Automotive Service Technicians and Mechanics (49-3023)	22,833	22,172	(662)	(3%)	2,291
<b>Middle-Skill Total</b>	<b>37,332</b>	<b>36,539</b>	<b>(793)</b>	<b>(2%)</b>	<b>3,577</b>
Automotive Glass Installers and Repairers (49-3022)	1,444	1,304	(140)	(10%)	144
Tire Repairers and Changers (49-3093)	2,689	2,610	(79)	(3%)	316
<b>Below Middle-Skill Total</b>	<b>4,133</b>	<b>3,914</b>	<b>(219)</b>	<b>(5%)</b>	<b>460</b>

#### Appendix B: Sources

- O\*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

For more information, please contact:

Jesse Crete, Ed. D., Director  
 Center of Excellence, Orange County  
[crete.jesse@rsccd.edu](mailto:crete.jesse@rsccd.edu)

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