



Automotive Technology (TOP 0948.00)

April 2023

Prepared by the South Central Coast Center of Excellence for
Labor Market Research

Program Recommendation

This report was compiled by the South Central Coast¹ Center of Excellence to provide regional labor market data for the program recommendation – Automotive Technology. This report can help determine whether there is demand in the local labor market that is not being met by the supply from programs of study (CCC and non-CCC) that align with this occupation group.

Key Findings

- In the South Central Coast region, **the number of jobs related to Automotive Technology are expected to decrease** for Electronic Equipment Installers and Repairers, Motor Vehicles and **remain steady** for Automotive Service Technicians and Mechanics, First-Line Supervisors of Mechanics, Installers, and Repairers, Installation, Maintenance, and Repair Workers, All Other, and Automotive Body and Related Repairers.
- Automotive Technology is anticipated to experience a **low risk of automation** for First-Line Supervisors of Mechanics, Installers, and Repairers, and a **high risk** for the other four related occupations.
- In 2021 there were 351 regional completions in programs related to the occupations identified as aligned with Automotive Technology and 887 openings, indicating an **undersupply**.
- Typical entry-level education ranges from a **postsecondary nondegree award** for Automotive Service Technicians and Mechanics to a **high school diploma or equivalent** for the other four related occupations.
- Completers of Automotive Technology programs from the 2019-2020 academic year in the South Central Coast region had a **median annual wage upon completion of \$30,444**.
- 64% of students are **employed within a year** after completing a program.
- 27% of students **attained a living wage** within a year of completion.
- Completers experienced an average of +66% **change in earnings after exiting**.
- 74% of students were **part-time**, 21% **skill builders**, 48% **first-generation**, and 84% **economically disadvantaged**.

¹ The South Central Coast Region consists of San Luis Obispo County, Santa Barbara County, Ventura County, and the following cities from North Los Angeles County: Canyon Country, Castaic, Lake Hughes, Lancaster, Littlerock, Llano, Newhall, Palmdale, Pearblossom, Santa Clarita, Stevenson Ranch, and Valencia.

Occupation Codes and Descriptions

There are five occupations in the standard occupational classification (SOC) system that were identified as related to Automotive Technology for this analysis. The occupation titles and descriptions, as well as reported job titles, are included in Exhibit 1.

Exhibit 1 – Occupation, Description, and Sample Job Titles

SOC Code	Title	Description	Sample of Reported Job Titles
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	Directly supervise and coordinate the activities of mechanics, installers, and repairers. May also advise customers on recommended services. Excludes team or work leaders.	Electrical and Instrumentation Supervisor (E and I Supervisor), Facilities Maintenance Supervisor, Facility Maintenance Supervisor, Maintenance Coordinator, Maintenance Foreman, Maintenance Manager, Maintenance Planner, Maintenance Superintendent, Maintenance Supervisor, Service Manager
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	Install, diagnose, or repair communications, sound, security, or navigation equipment in motor vehicles.	Automotive Technician, Car Audio Installer, Car Electronics Installer, Car Stereo Installer, Electronic Equipment Installer, Electronic Technician, Installation Installer, Installer, Mobile Electronics Installation Specialist, Mobile Electronics Installer
49-3021	Automotive Body and Related Repairers	Repair and refinish automotive vehicle bodies and straighten vehicle frames.	Auto Body Man, Auto Body Repair Technician (Auto Body Repair Tech), Auto Body Repairman, Automotive Body Technician (Auto Body Tech), Body Man, Body Technician (Body Tech), Collision Repair Technician (Collision Repair Tech), Collision Technician (Collision Tech), Frame Man, Refinish Technician (Refinish Tech)
49-3023	Automotive Service Technicians and Mechanics	Diagnose, adjust, repair, or overhaul automotive vehicles.	Automotive Drivability Technician (Auto Drivability Tech), Automotive Mechanic (Auto Mechanic), Automotive Service Technician (Auto Service Tech), Automotive Technician (Auto Tech), Diagnostic Technician (Diagnostic Tech), Heavy Line Technician (Heavy Line Tech), Lube Tech (Lubrication Technician), Mechanic, Quick Service Technician, Service Technician

SOC Code	Title	Description	Sample of Reported Job Titles
49-9099	Installation, Maintenance, and Repair Workers, All Other	All installation, maintenance, and repair workers not listed separately.	--

Source: O*NET Online

Current and Future Employment

In the South Central Coast region, the number of jobs related to Automotive Technology are expected to decrease for Electronic Equipment Installers and Repairers, Motor Vehicles and remain steady for Automotive Service Technicians and Mechanics, First-Line Supervisors of Mechanics, Installers, and Repairers, Installation, Maintenance, and Repair Workers, All Other, and Automotive Body and Related Repairers.

Exhibit 2 – Five-Year Projections for Automotive Technology in the South Central Coast Region

SOC	Occupation	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change
49-3023	Automotive Service Technicians and Mechanics	4,141	4,044	-97	-2%
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	2,476	2,544	68	3%
49-9099	Installation, Maintenance, and Repair Workers, All Other	1,500	1,495	-5	0%
49-3021	Automotive Body and Related Repairers	695	711	16	2%
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	22	16	-6	-26%

Source: Economic Modeling Specialists International (EMSI)

Earnings

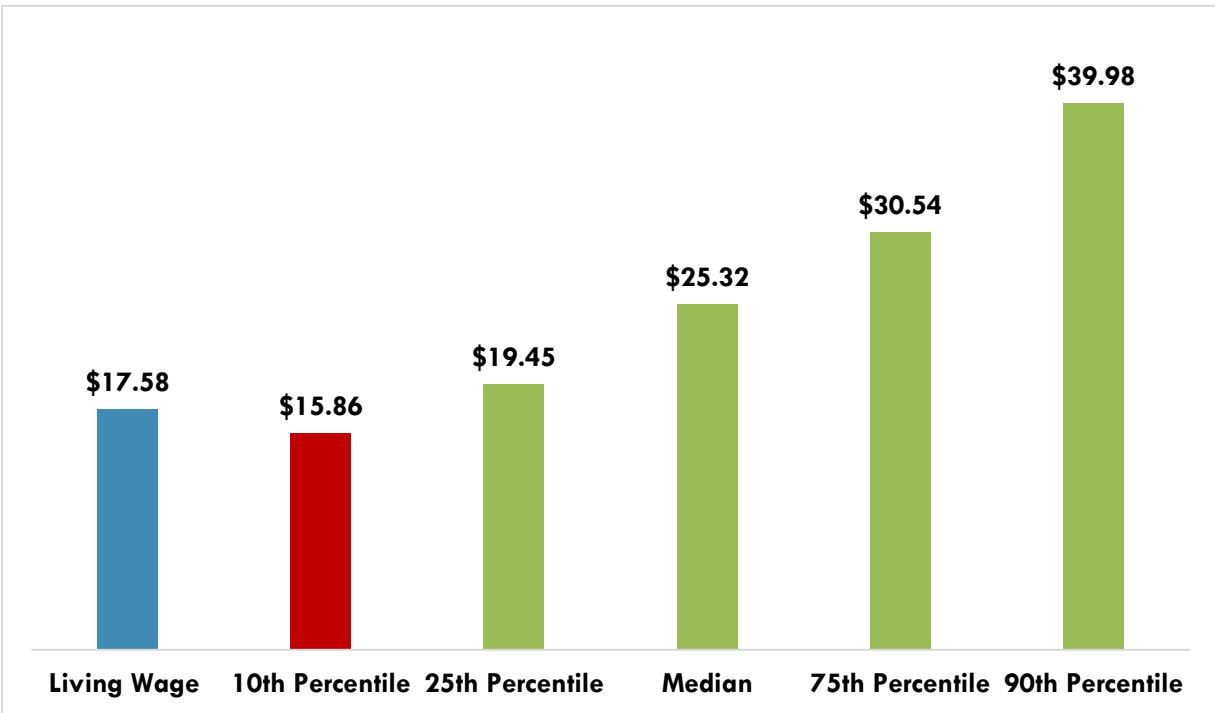
Exhibit 3 contains hourly wages and annual average earnings for these occupations. Entry-level hourly earnings are represented by the 25th percentile of wages, median hourly earnings are represented by the 50th percentile of wages, and experienced hourly earnings are represented by the 75th percentile of wages, demonstrating various levels of employment.

Exhibit 3 – Earnings for Automotive Technology in the South Central Coast Region

SOC	Occupation	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
49-3023	Automotive Service Technicians and Mechanics	\$15.17	\$24.16	\$29.39
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	\$29.12	\$37.49	\$47.28
49-9099	Installation, Maintenance, and Repair Workers, All Other	\$16.77	\$18.74	\$23.78
49-3021	Automotive Body and Related Repairers	\$18.76	\$26.53	\$29.87
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	\$17.45	\$19.69	\$22.40

Source: Economic Modeling Specialists International (EMSI)

Exhibit 3b – Earnings for Automotive Technology in the South Central Coast Region



Source: Family Needs Calculator (Living wage is based on Single Adult households with no children); Economic Modeling Specialists International (EMSI)

Employer Job Postings

In this research brief, real-time labor market information is used to provide a more nuanced view of the current job market, as it captures job advertisements for occupations relevant to the field of study. Employer job postings are consulted to understand who is looking in the field, and what they are looking for in potential candidates. To identify job postings related to Automotive Technology the following standard occupational classifications were used:

49-3023	Automotive Service Technicians and Mechanics
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers
49-3021	Automotive Body and Related Repairers
49-9099	Installation, Maintenance, and Repair Workers, All Other
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles

Top Occupations

In 2022, there were 3,722 employer postings for the occupations related to Automotive Technology.

Exhibit 4 – Top Occupations by Job Postings

SOC Code	Occupation	Job Postings, Full Year 2022
49-3023	Automotive Service Technicians and Mechanics	2,080
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	974
49-3021	Automotive Body and Related Repairers	402
49-9099	Installation, Maintenance, and Repair Workers, All Other	245
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	21

Source: Labor Insight/Jobs (Burning Glass)

Exhibit 4b – Top Occupations and Risk of Automation

SOC Code	Occupation	Risk of Automation
49-3023	Automotive Service Technicians and Mechanics	High
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	Low
49-3021	Automotive Body and Related Repairers	High
49-9099	Installation, Maintenance, and Repair Workers, All Other	High
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	High

Source: Labor Insight/Jobs (Burning Glass)

Top Titles

The top job titles for employers posting ads for jobs related to Automotive Technology are listed in Exhibit 5. Automotive Technicians is mentioned as the job title in 12% of all relevant job postings (287 postings).

Exhibit 5 – Job Titles

Title	Job Postings, Full Year 2022
Automotive Technicians	287
Maintenance Supervisors	165
Auto Body Technicians	146
Automotive Mechanics	118
Service Technicians	98

Source: Labor Insight/Jobs (Burning Glass)

Top Employers

Exhibit 6 lists the major employers hiring professionals in the Automotive Technology field. The top employer posting job ads was AutoNation. The top worksite cities for these occupations were Oxnard, Santa Clarita, Thousand Oaks, Ventura, and Santa Barbara.

Exhibit 6 – Top Employers (n=1,552)

Employer	Job Postings, Full Year 2022
AutoNation	89
Tri-Counties Regional Center	80
Pep Boys	71
Caliber Collision	69
Jiffy Lube	55

Source: Labor Insight/Jobs (Burning Glass)

Skills

The tables in Exhibit 7 list employers' most commonly requested skills in job postings related to Automotive Technology. Automotive Services is the most sought-after specialized skill for employers, followed by HVAC and Mechanics. Customer Service, Communications, and Management were the most requested baseline skills. Microsoft Office, Microsoft Excel, and Microsoft Outlook were the most commonly requested software and programming skills.

Exhibit 7 – Specialized Skills (n= 7,853)

Skills	Job Postings, Full Year 2022
Automotive Services	623
HVAC	321
Mechanics	319
Brakes	318
Suspension (Vehicle)	290
Hand Tools	290
Changing Oil	229
Vehicle Inspection	198
Painting	189
Preventive Maintenance	185
Plumbing	176
Transmission	175
Electrical Systems	156
Power Tool Operation	154
Occupational Safety and Health Administration (OSHA)	139

Source: Labor Insight/Jobs (Burning Glass)

Exhibit 7b – Baseline Skills (n= 12,816)

Skills	Job Postings, Full Year 2022
Customer Service	1,227
Communications	1,128
Management	785
Operations	598
Good Driving Record	556
Sales	520
Detail Oriented	479
Problem Solving	444
Troubleshooting (Problem Solving)	420
Leadership	372

Source: Labor Insight/Jobs (Burning Glass)

Exhibit 7c – Software and Programming Skills (n= 1,053)

Skills	Job Postings, Full Year 2022
Microsoft Office	152
Microsoft Excel	138
Microsoft Outlook	73
Software Systems	66
Inventory Control Systems	59
Microsoft PowerPoint	58
Microsoft Word	56
Disassembler	43
SAP Applications	34
Apache Struts	26

Source: Labor Insight/Jobs (Burning Glass)

Industry Concentration

Exhibit 8 shows the industries with the most Automotive Technology postings in the South Central Coast region. Note: 33% of records have been excluded because they do not include an industry. As a result, the chart below may not be representative of the full sample.

Exhibit 8 – Industries Employing the Most in the Automotive Technology Field, 2022

Industry	Occupation Group Jobs in Industry	% of Occupation Group in Industry
Retail Trade	599	24%
Manufacturing	441	18%
Other Services (except Public Administration)	342	14%
Administrative and Support and Waste Management and Remediation Services	202	8%
Professional, Scientific, and Technical Services	143	6%

Source: Labor Insight/Jobs (Burning Glass)

Certifications

Exhibit 9 lists the most in-demand certifications in the Automotive Technology field. The top requested certification in job postings was a Valid Driver’s License.

Exhibit 9 – Certifications (n= 2,609)

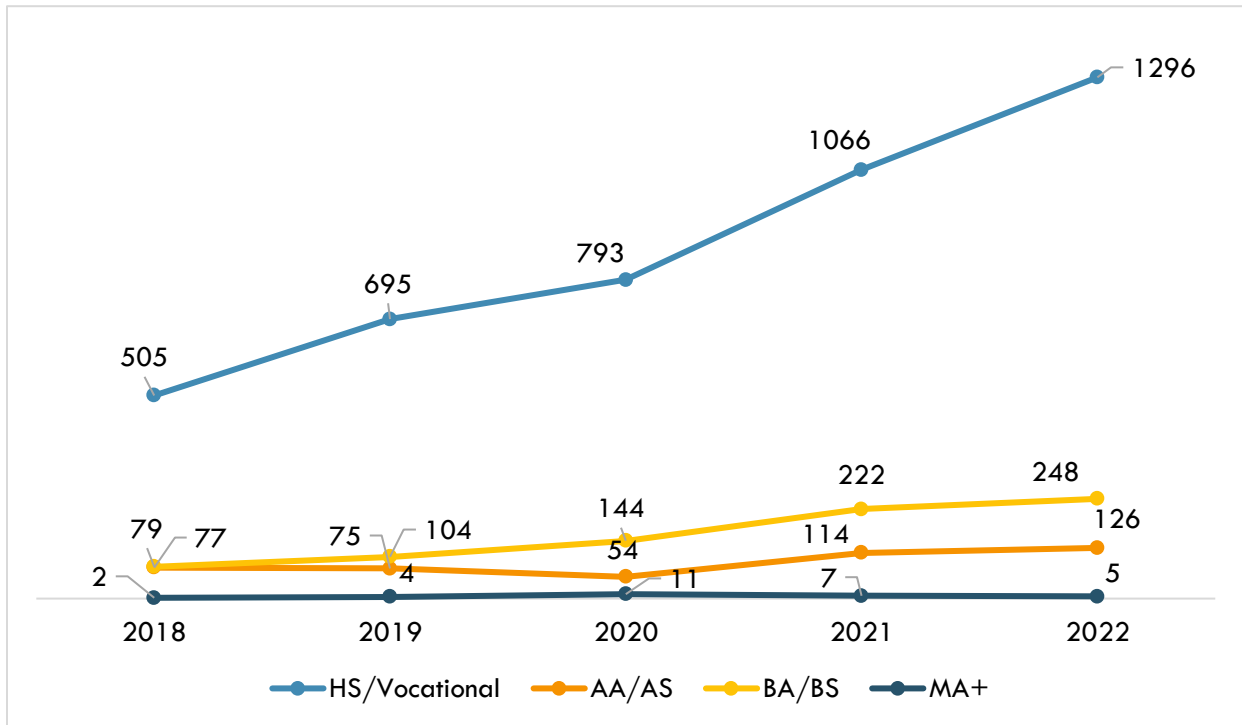
Certifications	Job Postings, Full Year 2022
Valid Driver’s License	1,582
Automotive Service Excellence (ASE) Certification	478
Security Clearance	50
Secret Clearance	42
Airframe and Powerplant (A&P) Certification	41

Source: Labor Insight/Jobs (Burning Glass)

Job Postings - Minimum Educational Attainment Over Time

Exhibit 10 displays the change in job advertisements over the last five years for Automotive Technology, according to the minimum advertised education. In 2022, there were 1,675 total job ads posted with a minimum advertised education, with 1,296 of them requiring a high school diploma or vocational training.

Exhibit 10 – Educational Demand, Minimum Advertised



Source: Labor Insight / Jobs (Burning Glass)

Job Postings – Proportion of Job Postings by Minimum Educational Attainment Required

To gauge employer preference for candidates with particular education levels, the proportion of job postings by minimum advertised education appears in Exhibit 11. Employers posting job ads for Automotive Technology have frequently sought candidates with a high school diploma or vocational training.

Exhibit 11 – Occupational Demand by Education, Minimum Advertised

Minimum Education Requirement	2018	2019	2020	2021	2022
HS Diploma / Vocational Training	76%	79%	79%	76%	77%
Associate Degree	12%	9%	5%	8%	8%
Bachelor’s Degree	12%	12%	14%	16%	15%
Graduate Degree	0%	0%	1%	0%	0%

Source: Labor Insight/ Jobs (Burning Glass)

Education and Training

Exhibit 12 shows the typical entry-level education requirement for the occupations of interest, along with the typical on-the-job training needed to attain competency in the occupation.

Exhibit 12 – Education and Training Requirements

SOC	Occupation	Typical entry-level education	Typical on-the-job training
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	High school diploma or equivalent	None
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	High school diploma or equivalent	Moderate-term on-the-job training
49-3021	Automotive Body and Related Repairers	High school diploma or equivalent	Long-term on-the-job training
49-3023	Automotive Service Technicians and Mechanics	Postsecondary nondegree award	Short-term on-the-job training
49-9099	Installation, Maintenance, and Repair Workers, All Other	High school diploma or equivalent	Moderate-term on-the-job training

Source: Bureau of Labor Statistics Employment Projections (Educational Attainment)

Regional Completions and Openings

There were 351 regional completions (2021) and 887 regional openings (2021) in the South Central Coast region aligned with programs related to the occupations in this report.

Exhibit 13 – Completions and Openings

18 Regional Institutions had Related Programs (2021)	351 Regional Completions (2021)	887 Annual Openings (2021)
--	---	--------------------------------------

Source: Economic Modeling Specialists International (EMSI)

Related Programs

CIP Code	Program	Completions (2021)
47.0604	Automobile/Automotive Mechanics Technology/Technician	167
47.0101	Electrical/Electronics Equipment Installation and Repair Technology/Technician, General	60
46.0302	Electrician	32
15.0613	Manufacturing Engineering Technology/Technician	28
47.0603	Autobody/Collision and Repair Technology/Technician	23
47.0605	Diesel Mechanics Technology/Technician	23
47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	18
15.1701	Energy Systems Technology/Technician	0

Source: Economic Modeling Specialists International (EMSI)

CCC and Non-CCC Awards

Exhibit 14 lists the number of completers from programs related to Automotive Technology in the South Central Coast region.

Exhibit 14 – CCC and Non-CCC Awards the South Central Coast, 2021

CCC Programs	Completers
Antelope Valley College	83
Oxnard College	81
Cuesta College	62
Ventura College	48
Allan Hancock College	39
Santa Barbara City College	11
College of the Canyons	9
Non-CCC Programs	Completers
San Joaquin Valley College-Lancaster	18

Source: Economic Modeling Specialists International (EMSI)

Student Outcomes

The CTE LaunchBoard provides student outcome data on the effectiveness of CTE programs. The following student outcome information was collected from exiters of the regional Automotive Technology Programs (TOP: 0948.00) for the 2019-2020 academic year.

- Completers of Automotive Technology programs from the 2019-2020 academic year in the South Central Coast region had a **median annual wage upon completion of \$30,444**.
- 64% of students are **employed within a year** after completing a program.
- 27% of students **attained a living wage** within a year of completion.
- Completers experienced an average of +66% **change in earnings after exiting**.
- 74% of students were **part-time**, 21% **skill builders**, 48% **first-generation**, and 84% **economically disadvantaged**.

Sources

O*Net Online, Labor Insight/Jobs (Burning Glass), Economic Modeling Specialists International (EMSI), MIT Living Wage Calculator, Bureau of Labor Statistics (BLS) Education Attainment, California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart, CTE LaunchBoard, Statewide CTE Outcomes Survey, Employment Development Department Unemployment Insurance Dataset

Notes

Data included in this analysis represent the labor market demand for relevant positions most closely related to Automotive Technology. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study and can signal demand and show what employers are looking for in potential employees, but is not a perfect measure of the quantity of open positions. All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; 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 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.