** Automotive Service Technicians and Mechanics**

**Labor Market Information Report**

**City College of San Francisco**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

March 2019

# Recommendation

Based on all available data, there appears to be an undersupply of Automotive Service Technicians and Mechanicscompared to the demand for this cluster of occupations in the Bay region and in the Mid-Peninsula sub-region (San Francisco and San Mateo Counties.) There is a projected annual gap of about 910 students in the Bay region and 26 students in the Mid-Peninsula Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0948.00 - Automotive Technology in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at City College of San Francisco (CCSF) and in the region.

# Introduction

This report profiles Automotive Service Technicians and Mechanicsin the 12 county Bay region and in the Mid-Peninsula sub-region for a proposed new program at City College of San Francisco.

|  |
| --- |
| * **Automotive Service Technicians and Mechanics (SOC 49-3023): Diagnose, adjust,** repair, or overhaul automotive vehicles. Excludes “Automotive Body and Related Repairers" (49-3021), "Bus and Truck Mechanics and Diesel Engine Specialists" (49-3031), and "Electronic Equipment Installers and Repairers, Motor Vehicles" (49-2096). |
| Entry-Level Educational Requirement: Postsecondary nondegree *award* |
| Training Requirement: Short-term *on-the-job training* |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 33% |

# Occupational Demand

**Table 1. Employment Outlook for Automotive Service Technicians and Mechanics in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Automotive Service Technicians and Mechanics | 17,206 | 18,281 | 1,075 | 6% | 9,232 | 1,846 | $11.46 | $21.36 |

*Source: EMSI 2019.1*

**Bay Region** includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Automotive Service Technicians and Mechanics in Mid-Peninsula Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Automotive Service Technicians and Mechanics | 3,324 | 3,435 | 111 | 3% | 1,667 | 333 | $13.32 | $23.32 |

*Source: EMSI 2019.1*

**Mid-Peninsula Sub-Region** includes San Francisco and San Mateo Counties

### Job Postings in Bay Region and Mid-Peninsula Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (March 2018 - Feb 2018)**

| Occupation | Bay Region | Mid-Peninsula |
| --- | --- | --- |
| Automotive Service Technicians and Mechanics | 4,576 | 968 |
| Automotive Master Mechanics | 477 | 146 |
| **Total** | **5,053** | **1,114** |

*Source: Burning Glass*

**Table 4. Top Job Titles for Automotive Service Technicians and Mechanics for latest 12 months (March 2018 - Feb 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | Mid-Peninsula | Common Title | Bay | Mid-Peninsula |
| Auto Technician | 805 | 175 | Technician, Retail Industry | 44 | 3 |
| Service Technician | 310 | 47 | Automotive Advisor | 34 | 0 |
| Lube Technician | 292 | 52 | Brake And Alignment Technician | 32 | 5 |
| Auto Mechanic | 253 | 59 | Quality Technician | 32 | 0 |
| Mechanic | 251 | 51 | Automotive Advisor, Retail Industry | 26 | 0 |
| Technician | 217 | 48 | Foreman | 25 | 4 |
| Detailer | 207 | 54 | Assessor | 23 | 4 |
| Automotive Service Advisor | 189 | 39 | Installation Maintenance Sales, Service, Tire | 23 | 2 |
| Automotive Service Technician | 173 | 14 | Mobile Technician | 21 | 8 |
| Automotive Technician | 86 | 20 | Service Advisor | 21 | 3 |
| Fueler | 54 | 23 | Flat Rate Technician | 20 | 1 |
| Roadside Rescuer | 51 | 10 | Operator | 20 | 3 |
| Oil Change Technician | 50 | 17 | Service Cashier | 20 | 5 |
| Shop Technician | 46 | 12 | Specialist | 20 | 10 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Automotive Service Technicians and Mechanics in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2017) | Jobs in Industry (2022) | % Change (2017-22) | % in Industry (2017) |
| General Automotive Repair (811111) | 5,940 | 6,016 | 8% | 34.7% |
| New Car Dealers (441110) | 4,579 | 4,619 | 9% | 26.6% |
| Automotive Body, Paint, and Interior Repair and Maintenance (811121) | 921 | 915 | 0% | 5.3% |
| Automotive Parts and Accessories Stores (441310) | 674 | 654 | (9%) | 3.8% |
| Other Automotive Mechanical and Electrical Repair and Maintenance (811118) | 480 | 481 | (2%) | 2.8% |
| Local Government, Excluding Education and Hospitals (903999) | 452 | 445 | (4%) | 2.6% |
| Tire Dealers (441320) | 383 | 399 | 13% | 2.3% |
| Car Washes (811192) | 375 | 369 | 3% | 2.1% |
| All Other Automotive Repair and Maintenance (811198) | 328 | 337 | 16% | 1.9% |
| Used Car Dealers (441120) | 253 | 277 | 35% | 1.6% |
| Automotive Transmission Repair (811113) | 189 | 180 | (19%) | 1.0% |

*Source: EMSI 2019.1*

**Table 6. Top Employers Posting Jobs for Automotive Service Technicians and Mechanics in Bay Region and Mid-Peninsula Sub-Region (March 2018 - Feb 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Mid-Peninsula |
| Hansel Auto Group | 169 | Lexus | 34 | Chrysler | 35 |
| Bridgestone / Firestone | 157 | Yourmechanic | 33 | Jiffy Lube | 34 |
| United Parcel Service Incorporated | 151 | Goodyear | 32 | United Parcel Service Incorporated | 26 |
| Jiffy Lube | 117 | Kar Auction Services | 30 | Bridgestone / Firestone | 22 |
| Del Grande Dealer Group | 111 | Qvale Auto Group | 30 | Sonic Automotive | 22 |
| Chrysler | 106 | US Army | 30 | Amerit Fleet Solutions | 21 |
| Autonation | 83 | FedEx | 29 | Serramonte Ford | 18 |
| Penske Automotive Group | 82 | Subaru | 29 | Kar Auction Services | 14 |
| Pep Boys | 64 | Allstate | 28 | Tesla | 14 |
| Sunstate Equipment Co | 63 | Chevrolet | 28 | Sunstate Equipment Company | 13 |
| Sonic Automotive | 55 | Best Buy | 25 | Hertz Corporation | 12 |
| Amerit Fleet Solutions | 51 | Hendrick Automotive Group | 25 | Bmw San Francisco | 11 |
| Carmax | 51 | Nissan North America Incorporated | 25 | Pep Boys | 11 |
| Lithia Motors Inc | 45 | Valvoline | 24 | Sears | 11 |
| Tesla Motors | 45 | Big O Tires | 21 | Enterprise Rent-A-Car | 10 |
| Honda | 43 | Les Schwab Tire Centers | 21 | Allstate | 9 |
| Toyota Motors | 43 | Skill Loan Llc | 21 | Allstate Good Hands Rescue Network | 9 |
| Tesla | 41 | Les Schwab | 20 | Penske | 9 |
| Sears | 40 | Hertz Corporation | 19 | Toyota Motors | 8 |
| Penske | 37 | Serramonte Ford | 18 | Your Location Lubrication | 8 |
| Allstate Good Hands Rescue Network | 34 | Cox Communications | 16 | Carmax | 7 |

*Source: Burning Glass*

# Educational Supply

There are 14 community colleges in the Bay Region issuing 936 awards on average annually (last 3 years) on TOP 0948.00 - Automotive Technology. There are two colleges in the Mid-Peninsula Sub-Region issuing 307 awards on average annually (last 3 years) on this TOP code.

**Table 7. Awards on TOP 0948.00 - Automotive Technology in the Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Headcount | Associates | Certificates | Total |
| **Alameda** | East Bay | 253 | 12 | 24 | 36 |
| **Chabot Hayward** | East Bay | 319 | 13 | 40 | 54 |
| **Contra Costa** | East Bay | 145 | 2 | 14 | 15 |
| **Deanza** | Silicon Valley | 596 | 52 | 106 | 158 |
| **Evergreen Valley** | Silicon Valley | 251 | 10 | 19 | 28 |
| **Hartnell** | Santa Cruz & Monterey | 118 | 3 | 3 | 6 |
| **Las Positas** | East Bay | 153 | 4 | 11 | 15 |
| **Los Medanos** | East Bay | 279 | 12 | 42 | 55 |
| **Marin** | North Bay | 155 | 1 | 7 | 8 |
| **Monterey** | Santa Cruz & Monterey | 137 | 3 | 14 | 17 |
| **San Francisco** | Mid-Peninsula | 188 | 5 | 94 | 98 |
| **Santa Rosa** | North Bay | 325 | 3 | 230 | 234 |
| **Skyline** | Mid-Peninsula | 573 | 6 | 202 | 209 |
| **Solano** | North Bay | 140 | 0 | 2 | 3 |
| **Total Bay Region** | | **3,632** | **127** | **809** | **936** |
| **Total Mid-Peninsula Sub-Region** | | **761** | **11** | **296** | **307** |

# *Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 1,846 annual openings for Automotive Service Technicians and Mechanics and 936 annual (3-year average) awards for an annual undersupply of 910 students. In the Mid-Peninsula Sub-Region, there is also a gap with 333 annual openings and 307 annual (3-year average) awards for an annual undersupply of 26 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0948.00 - Automotive Technology**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | City College of San Francisco (All CTE Programs) | State (0948.00) | Bay (0948.00) | Mid-Peninsula (0948.00) | City College of San Francisco (0948.00) |
| % Employed Four Quarters After Exit | 74% | 72% | 70% | 76% | 74% | 63% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,170 | $6,800 | $8,992 | $11,338 | $7,138 |
| Median % Change in Earnings | 46% | 31% | 80% | 72% | 38% | 302%  (n=18) |
| % of Students Earning a Living Wage | 63% | 65% | 47% | 60% | 70% | 29% |

*Source: Launchboard Pipeline (version available on 3/1/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Automotive Service Technicians and Mechanics in Bay Region (March 2018 - Feb 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Repair | 2,827 | Lifting Ability | 234 | Occupational Health and Safety | 141 |
| Auto Repair | 1,453 | Cleaning | 232 | Manual Dexterity | 135 |
| Customer Service | 1,151 | Motor Vehicle Operation | 201 | Personal Protective Equipment (PPE) | 120 |
| Automotive Services Industry Knowledge | 1,047 | Store Management | 194 | Transmission Repair | 112 |
| Customer Contact | 459 | Test Equipment | 181 | Data Entry | 111 |
| Vehicle Maintenance | 397 | Power Tools | 180 | Wiring | 111 |
| Hand Tools | 395 | Welding | 172 | Tire Repairs | 110 |
| Vehicle Inspection | 336 | Quality Assurance and Control | 170 | Machinery | 108 |
| Scheduling | 328 | Providing Warranties | 162 | Technical Training | 108 |
| Automotive Industry Knowledge | 321 | Automotive Mechanical Diagnosis | 161 | Product Knowledge | 100 |
| Sales | 302 | Brake Work | 155 | Sales Goals | 100 |
| Predictive / Preventative Maintenance | 298 | Inspection Records | 148 | Forklift Operation | 99 |
| Oil Changes | 295 | Retail Industry Knowledge | 148 | Budgeting | 87 |
| Electrical Systems | 277 | Retail Operations | 147 | Project Management | 87 |
| Mechanical Repair | 251 | Battery Testing and Installation | 145 | Schematic Diagrams | 83 |

*Source: Burning Glass*

**Table 10. Certifications for Automotive Service Technicians and Mechanics in the Bay Region (March 2018 - Feb 2018)**

Note: 45% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Driver's License | 2,343 | Certified A+ Technician | 9 |
| Automotive Service Excellence (ASE) Certification | 685 | Board Certified Behavior Analyst (BCBA) | 8 |
| Certified Lube Technician | 47 | Certified Fluid Power | 8 |
| Certified Satellite Installer (CSI) | 41 | Certified Pest Control | 8 |
| Cdl Class B | 30 | CompTIA Network+ | 8 |
| Chrysler Certified | 27 | Epa 609 | 8 |
| Air Brake Certified | 26 | Registered Behavior Technician | 8 |
| Mobile Electronics Certified Professional | 26 | Diesel Mechanic Certification | 7 |
| Mobile Electronics Certified Professional (MECP) | 26 | Hazwoper | 7 |
| CDL Class A | 23 | Medical Examiner's License | 7 |
| Electrical Certification | 22 | Automation Certification | 6 |
| Cdl Class C | 15 | Environmental Protection Agency Certification | 6 |
| First Aid Cpr Aed | 15 | Brake Inspector Certification | 5 |
| Security Clearance | 15 | Electric Vehicle Technician (EVT) | 5 |
| Good Conduct | 12 | I-Car | 5 |
| Airframe and Powerplant (A and P) Certification | 11 | MECP Advanced Certification | 5 |
| American Registry For Diagnostic Medical Sonography (ARDMS) | 10 | MECP Master Installation | 5 |
| Forklift Operator Certification | 10 | Six Sigma Certification | 5 |
| MECP Basic Installation | 10 | Welding Certification | 5 |
| Occupational Safety and Health Administration Certification | 10 | Board Certified Assistant Behavior Analyst (BCaBA) | 4 |
| Air Conditioning (AC) Certification | 9 | Certified Arborist | 4 |

*Source: Burning Glass*

**Table 11. Education Requirements for Automotive Service Technicians and Mechanics in Bay Region**

Note: 68% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |
| --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings |
| High school or vocational training | 1,517 (95%) |
| Associate Degree | 83 (5%) |
| Bachelor’s Degree or Higher | 0 (0%) |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor’s Office MIS system

# Contacts

For more information, please contact:

* Doreen O’Donovan, Data Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), [doreen@baccc.net](mailto:doreen@baccc.net) or (831) 479-6481
* John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, [jcarrese@ccsf.edu](mailto:jcarrese@ccsf.edu) or (415) 267-6544