

# Automotive Technology Occupations

# Labor Market Information Report

# Chabot College

## Prepared by the San Francisco Bay Center of Excellence for Labor Market Research

**March 2021**

## Recommendation

Based on all available data, there appears to be an “undersupply” of Automotive Technology workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda and Contra Costa counties). There is a projected annual gap of about 890 students in the Bay region and 426 students in the East Bay Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0948.00 - Automotive Technology programs 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 Chabot College and in the region.

This report profiles Automotive Technology Occupations in the 12 county Bay region and in the East Bay sub-region for four (4) proposed new programs at Chabot College:

1. Automotive Technology
2. Automotive Engine Performance
3. Automotive Electrical and Body Electronics Technology
4. Automotive Powertrain Technology

This labor market report can be used for all four programs when each is submitted to the BACCC under the Program Recommendation process. This is the case, because the TOP code (TOP 0948.00) and the SOC code (49-3023.00) are the exact same for all four programs.

* **Automotive Service Technicians and Mechanics (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: 36%

## Occupational Demand

**Table 1. Employment Outlook for Automotive Technology Occupations in Bay Region**

| **Occupation** | **2019 Jobs** | **2024 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Automotive Service Technicians and Mechanics | 18,328 | 18,054 | -274 | -1% | 8,936 | 1,787 | $ 18.10 | $ 24.53 |
| **Total** | **18,328** | **18,054** | **-274** | **-1%** | **8,936** | **1,787** | **$18.10** | **$24.53** |
| Source: EMSI 2020.4 |

**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 Technology Occupations in East Bay Sub-region**

| **Occupation** | **2019 Jobs** | **2024 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Automotive Service Technicians and Mechanics | 6,001 | 6,019 | 18 | 0% | 2,968 | 594 | $ 18.11 | $ 24.25 |
| **Total** | **6,001** | **6,019** | **18** | **0%** | **2,968** | **594** | **$18.11** | **$24.25** |
| Source: EMSI 2020.4 |

**East Bay Sub-Region includes:** Alameda and Contra Costa counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Mar 2020 - Feb 2021)**

| **Occupation** | **Bay Region** | **East Bay** |
| --- | --- | --- |
| Automotive Specialty Technicians | 5,255 | 1,884 |
| Automotive Master Mechanics | 354 | 127 |
| Source: Burning Glass |

**Table 4a. Top Job Titles for Automotive Technology Occupations for latest 12 months (Mar 2020 - Feb 2021) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Automotive Technician | 366 | General Service Technician | 56 |
| Service Technician | 124 | Car Detailer | 48 |
| Lube Technician | 102 | Vehicle Service Technician  | 45 |
| Automotive Service Advisor | 94 | Technician | 45 |
| Automotive Lube Technician | 85 | Mechanic | 35 |
| Automotive Mechanic | 82 | Mechanic B | 33 |
| Self - Driving Vehicle Operator | 66 | Automotive Service Advisor/Writer | 31 |
| Automotive Technician/Mechanic | 61 |  |  |
| Source: Burning Glass |

**Table 4b. Top Job Titles for Automotive Technology Occupations for latest 12 months (Mar 2020 - Feb 2021) East Bay Sub-Region**

| **Title** | **East Bay** | **Title** | **East Bay** |
| --- | --- | --- | --- |
| Automotive Technician | 135 | Automotive Mechanic | 29 |
| Seasonal Personal Vehicle Package Driver | 65 | Self - Driving Vehicle Operator - San Fran | 27 |
| Service Technician | 45 | Automotive Assembler | 17 |
| Automotive Lube Technician | 42 | Mechanic | 15 |
| Automotive Service Advisor | 37 | Vehicle Condition Inspector | 13 |
| Lube Technician | 32 | Shop Technician | 13 |
| Automotive Technician/Mechanic | 30 |  |  |
| Source: Burning Glass |

## Industry Concentration

**Table 5. Industries hiring Automotive Technology Workers in Bay Region**

| **Industry – 6 Digit NAICS (No. American** **Industry Classification) Codes** | **Jobs in Industry (2019)** | **Jobs in Industry (2024)** | **% Change (2019-24)** | **% Occupation Group in Industry (2019)** |
| --- | --- | --- | --- | --- |
| General Automotive Repair | 6,401 | 6,068 | -5% | 35% |
| New Car Dealers | 5,028 | 4,409 | -12% | 27% |
| Automotive Body, Paint, and Interior Repair and Maintenance | 883 | 778 | -12% | 5% |
| Automotive Parts and Accessories Stores | 632 | 553 | -13% | 3% |
| Other Automotive Mechanical and Electrical Repair and Maintenance | 533 | 401 | -25% | 3% |
| Local Government, Excluding Education and Hospitals | 457 | 430 | -6% | 3% |
| Car Washes | 456 | 404 | -11% | 2% |
| Tire Dealers | 397 | 380 | -4% | 2% |
| Used Car Dealers | 348 | 364 | 4% | 2% |
| All Other Automotive Repair and Maintenance | 301 | 300 | 0% | 2% |
| Source: EMSI 2020.4 |

**Table 6. Top Employers Posting Automotive Technology Occupations in Bay Region and East Bay Sub-Region (Mar 2020 - Feb 2021)**

| **Employer** | **Bay** | **Employer** | **East Bay** |
| --- | --- | --- | --- |
| United Parcel Service Incorporated | 293 | United Parcel Service Incorporated | 132 |
| Bridgestone / Firestone | 124 | Carmax | 47 |
| Transdev Inc | 106 | Transdev Inc | 44 |
| Big O Tires | 94 | Bridgestone / Firestone | 40 |
| Carmax | 93 | Lucid Motors Inc | 39 |
| Goodyear | 92 | Big O Tires | 34 |
| Chrysler | 79 | Goodyear | 32 |
| Tesla | 77 | Jiffy Lube | 31 |
| Jiffy Lube | 67 | Chrysler | 30 |
| Climb Hire | 63 | Tesla | 28 |
| Source: Burning Glass |

## Educational Supply

There are 14 community colleges in the Bay Region issuing 897 awards on average annually (last 3 years ending 2018-19) on TOP 0948.00 - Automotive Technology. In the East Bay Sub-Region, there are five (5) community colleges that issued 168 awards on average annually (last 3 years) on this TOP code.

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

| **College** | **Subregion** | **Associate** | **Certificate 18+ Units** | **Certificate Low** | **Noncredit** | **Total** |
| --- | --- | --- | --- | --- | --- | --- |
| Alameda | East Bay | 9 | 0 | 21 | 0 | 30 |
| Chabot  | East Bay | 15 | 0 | 36 | 0 | 51 |
| Contra Costa | East Bay | 4 | 0 | 19 | 0 | 23 |
| De Anza | Silicon Valley | 38 | 0 | 113 | 0 | 151 |
| Evergreen Valley | Silicon Valley | 8 | 0 | 29 | 0 | 37 |
| Hartnell | SC-Monterey | 10 | 0 | 5 | 0 | 15 |
| Las Positas | East Bay | 4 | 0 | 3 | 0 | 7 |
| Los Medanos | East Bay | 11 | 0 | 46 | 0 | 57 |
| Marin | North Bay | 2 | 6 | 17 | 0 | 25 |
| Monterey | SC-Monterey | 3 | 0 | 19 | 0 | 22 |
| San Francisco | Mid-Peninsula | 6 | 0 | 87 | 0 | 93 |
| Santa Rosa | North Bay | 7 | 0 | 132 | 76 | 215 |
| Skyline | Mid-Peninsula | 6 | 0 | 149 | 0 | 155 |
| Solano | North Bay | 2 | 0 | 14 | 0 | 16 |
| **Total** |  | **125** | **6** | **690** | **76** | **897** |
| Source: Data Mart |

*Note: The annual average for awards is 2016-17 to 2018-19.*

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 1,787 annual openings for the Automotive Technology occupational cluster and 897 annual (3-year average) awards for an annual undersupply of 890 students. In the East Bay Sub-Region, there is also a gap with 594 annual openings and 168 annual (3-year average) awards for an annual undersupply of 426 students.

## Student Outcomes

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

| **Metric Outcomes** | **Bay****All CTE Programs** | **Chabot****All CTE Programs** | **State 0948.00** | **Bay 0948.00** | **East Bay 0948.00** | **Chabot 0948.00** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study\* | 75% | 75% | 68% | 75% | 77% | 88% |
| Median Annual Earnings for SWP Exiting Students | $45,864 | $41,556 | $28,488 | $38,482 | $36,078 | $39,666 |
| Median Change in Earnings for SWP Exiting Students | 31% | 35% | 45% | 52% | 73% | 64% |
| Exiting Students Who Attained the Living Wage | 53% | 50% | 44% | 41% | 37% | 43% |
| Source: Launchboard Strong Workforce Program from version 2018-19). \* Data from version 2017-18 |

## Skills, Certifications and Education

**Table 9. Top Skills for Automotive Technology Occupations in Bay Region (Mar 2020 - Feb 2021)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Repair | 2,940 | Vehicle Inspection | 269 |
| Auto Repair | 1,535 | Predictive / Preventative Maintenance | 262 |
| Customer Service | 1,052 | Personal Protective Equipment (PPE) | 255 |
| Automotive Services Industry Knowledge | 997 | Occupational Health and Safety | 241 |
| Oil Changes | 591 | Sales | 235 |
| Hand Tools | 419 | Welding | 235 |
| Scheduling | 417 | Commercial Driving | 232 |
| Cleaning | 390 | Lifting Ability | 232 |
| Motor Vehicle Operation | 375 | Engine Repair | 197 |
| Vehicle Maintenance | 367 | Brake Work | 185 |
| Automotive Industry Knowledge | 337 | Power Tools | 183 |
| Customer Contact | 303 | Manual Dexterity | 169 |
| Electrical Systems | 281 | Quality Assurance and Control | 157 |
| Tire Repairs | 273 | Diagnosis of Drivability | 153 |
| Source: Burning Glass |

**Table 10. Certifications for Automotive Technology Occupations in Bay Region (Mar 2020 - Feb 2021)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Driver's License | 2,914 | MECP Basic Installation | 25 |
| Automotive Service Excellence (ASE) Certification | 869 | CDL Class B | 23 |
| Air Brake Certified | 66 | Occupational Safety and Health Administration Certification | 22 |
| EPA 609 | 61 | Good Conduct | 21 |
| CDL Class A | 36 | OSHA Forklift Certification | 19 |
| Environmental Protection Agency Certification | 33 | Security Clearance | 14 |
| Mobile Electronics Certified Professional (MECP) | 30 | First Aid Cpr Aed | 14 |
| Chrysler Certified | 26 | Project Management Certification | 12 |
| CDL Class C | 26 | Certified Financial Planner (CFP) | 12 |
| Source: Burning Glass |

*Note: 42% 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.*

**Table 11. Education Requirements for Automotive Technology Occupations in Bay Region**

| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| --- | --- | --- |
| High school or vocational training | 2,051 | 97% |
| Associate's degree | 55 | 3% |
| Source: Burning Glass |

*Note: 62% 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.*

## 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/
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:

• Leila Jamoosian, Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), leila@baccc.net

• John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, jcarrese@ccsf.edu or (415) 267-6544