

# Labor Market Analysis for Program Recommendation

# Aircraft Maintenance Technology Occupations

# Las Positas College

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

**May 2022**

## Recommendation

Based on all available data, there appears to be an “undersupply” of Aircraft Maintenance Technology workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda, Contra Costa counties). There is a projected annual gap of about 486 students in the Bay region and 111 students in the East Bay Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0950.10 Aviation Airframe Mechanics 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 Las Positas College and in the region.

This report profiles Aircraft Maintenance Technology Occupations in the 12 county Bay region and in the East Bay sub-region for exploratory purposes at Las Positas College.

Labor market information (LMI) is not available at the eight-digit SOC Code level for Aviation Inspectors (53-6051.01), therefore, the data shown in Tables 1 and 2 is for Transportation Inspectors(at the six digit SOC level) and likely overstates demand for Aviation Inspectors. Tables 3, 4, 6, 9, 10 and 11 use job postings data from Burning Glass at the eight-digit SOC Code level for Aviation Inspectors (53-6051.01).

* **Avionics Technicians (49-2091):** Install, inspect, test, adjust, or repair avionics equipment, such as radar, radio, navigation, and missile control systems in aircraft or space vehicles.
  Entry-Level Educational Requirement: Associate’s degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 69%
* **Aircraft Mechanics and Service Technicians (49-3011):** Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Includes helicopter and aircraft engine specialists. Excludes “Avionics Technician” (49-2091).
  Entry-Level Educational Requirement: Postsecondary nondegree award
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 60%
* **Transportation Inspectors (53-6051):** Inspect equipment or goods in connection with the safe transport of cargo or people. Includes rail transportation inspectors, such as freight inspectors; rail inspectors; and other inspectors of transportation vehicles, not elsewhere classified. Excludes “Transportation Security Screeners” (33-9093).
  Entry-Level Educational Requirement: High school diploma or equivalent
  Training Requirement: Moderate-term on-the-job training
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 46%

## Occupational Demand

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

| **Occupation** | **2020 Jobs** | **2025 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Avionics Technicians | 814 | 813 | -0 | -0% | 348 | 70 | $41 | $70 |
| Aircraft Mechanics and Service Technicians | 3,882 | 3,773 | -109 | -3% | 1,844 | 369 | $37 | $67 |
| Transportation Inspectors | 926 | 930 | 4 | 0% | 536 | 107 | $32 | $71 |
| **Total** | **5,622** | **5,516** | **-106** | **-2%** | **2,728** | **546** |  |  |
| Source: EMSI 2021.3 |

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

| **Occupation** | **2020 Jobs** | **2025 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Avionics Technicians | 209 | 210 | 0 | 0% | 86 | 17 | $44 | $71 |
| Aircraft Mechanics and Service Technicians | 954 | 948 | -5 | -1% | 441 | 88 | $40 | $70 |
| Transportation Inspectors | 316 | 321 | 4 | 1% | 184 | 37 | $32 | $74 |
| **Total** | **1,479** | **1,479** | **0** | **0%** | **711** | **142** |  |  |
| Source: EMSI 2021.3 |

**East Bay Sub-Region includes:** Alameda, 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 (Apr 2021 - Mar 2022)**

| **Occupation** | **Bay Region** | **East Bay** |
| --- | --- | --- |
| Aircraft Mechanics and Service Technicians | 209 | 52 |
| Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation | 138 | 72 |
| Avionics Technicians | 93 | 29 |
| Aviation Inspectors | 20 | 9 |
| Freight and Cargo Inspectors | 3 | 3 |
| Source: Burning Glass |

**Table 4a. Top Job Titles for Aircraft Maintenance Technology Occupations for latest 12 months (Apr 2021 - Mar 2022) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Aircraft Maintenance Technician | 38 | Aircraft Maintenance Technician Central Roamer Float | 7 |
| Inspection Technician | 35 | Smog Check Technician | 7 |
| Composite Technician | 20 | Aircraft Mechanic | 6 |
| Avionics Technician | 17 | Car Inspector | 6 |
| Solar Inspection Technician | 16 | Fabricator Pre-Fab | 6 |
| Aerospace Source Inspector | 9 | Gse Skilled Mechanic - Flight Privileges | 6 |
| Smog Check Inspector | 9 | Manufacturing Visual Inspection | 6 |
| A And P Mechanic | 8 | Aircraft Maintenance Technician A and P | 5 |
| Automotive Inspector | 8 | Aircraft Technician | 5 |
| Source: Burning Glass |

**Table 4b. Top Job Titles for Aircraft Maintenance Technology Occupations for latest 12 months (Apr 2021 - Mar 2022) East Bay Sub-Region**

| **Title** | **East Bay** | **Title** | **East Bay** |
| --- | --- | --- | --- |
| Inspection Technician | 23 | A Pc Technician | 3 |
| Composite Technician | 11 | Avionics Harness Technician | 3 |
| Aircraft Maintenance Technician | 10 | Code Developer - Computational Solid Mechanic | 2 |
| Aerospace Source Inspector | 7 | Gse Mechanic | 2 |
| Solar Inspection Technician | 7 | Inspector - Solid Fuels | 2 |
| Automotive Inspector | 6 | Pcr Instrument Tester | 2 |
| Manufacturing Visual Inspection | 6 | Propulsion Build Technician | 2 |
| Smog Check Technician | 4 | Senior Inspection Technician | 2 |
| A and P Aircraft Mechanic - Corporate Pilot | 3 | Service/Installation Engineer | 2 |
| Source: Burning Glass |

## Industry Concentration

**Table 5. Industries hiring Aircraft Maintenance Technology Workers in Bay Region**

| **Industry - 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2020)** | **Jobs in Industry (2025)** | **% Change (2020-25)** | **% Occupation Group in Industry (2020)** |
| --- | --- | --- | --- | --- |
| Federal Government, Military | 1,185 | 1,215 | 3% | 22% |
| Other Airport Operations | 852 | 877 | 3% | 16% |
| Scheduled Passenger Air Transportation | 750 | 529 | -29% | 13% |
| Federal Government, Civilian, Excluding Postal Service | 413 | 417 | 1% | 8% |
| Local Government, Excluding Education and Hospitals | 238 | 236 | -1% | 4% |
| Other Support Activities for Air Transportation | 242 | 207 | -14% | 4% |
| Couriers and Express Delivery Services | 211 | 251 | 19% | 4% |
| Guided Missile and Space Vehicle Manufacturing | 99 | 99 | 0% | 2% |
| State Government, Excluding Education and Hospitals | 92 | 96 | 4% | 2% |
| Ambulance Services | 74 | 83 | 13% | 1% |
| Source: EMSI 2021.3 |

**Table 6. Top Employers Posting Aircraft Maintenance Technology Occupations in Bay Region and East Bay Sub-Region (Apr 2021 - Mar 2022)**

| **Employer** | **Bay** | **Employer** | **East Bay** |
| --- | --- | --- | --- |
| Sunpower Corporation | 16 | Sunpower Corporation | 9 |
| Global Medical Response | 13 | Semper Solaris | 5 |
| Joby Aviation | 12 | Astra | 5 |
| Semper Solaris | 10 | United Parcel Service Incorporated | 4 |
| Elliot Aviation Incorporated | 9 | Aerospace Composite Products | 4 |
| Siemens | 8 | Supplier Management Solutions, Llc | 3 |
| L3Harris | 8 | Southwest Airlines Company | 3 |
| Sunrun | 7 | Siemens | 3 |
| State of California | 6 | Pacific Coast Jet | 3 |
| Speedee Oil Change & Auto Service | 6 | Fanuc America Corporation | 3 |
| Source: Burning Glass |

## Educational Supply

There are four (4) community colleges in the Bay Region issuing 60 awards on average annually (last 3 years ending 2018-19) on TOP 0950.10 Aviation Airframe Mechanics. In the East Bay Sub-Region, there is one (1) community college that issued 31 awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0950.10 Aviation Airframe Mechanics in Bay Region**

| **College** | **Subregion** | **Associate** | **Certificate Low** | **Total** |
| --- | --- | --- | --- | --- |
| Alameda | East Bay | 3 | 28 | 31 |
| Gavilan | Silicon Valley | 0 | 11 | 11 |
| San Francisco | Mid-Peninsula | 8 | 8 | 16 |
| Solano | North Bay | 1 | 1 | 2 |
| **Total** |  | **12** | **48** | **60** |
| 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 labor market gap in the Bay region with 546 annual openings for the Aircraft Maintenance Technology occupational cluster and 60 annual (3-year average) awards for an annual undersupply of 486 students. In the East Bay Sub-Region, there is also a gap with 142 annual openings and 31 annual (3-year average) awards for an annual undersupply of 111 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0950.10 Aviation Airframe Mechanics**

| **Metric Outcomes** | **Bay All CTE Programs** | **Las Positas All CTE Programs** | **State 0950.10** | **Bay 0950.10** | **East Bay 0950.10** | **Las Positas 0950.10** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study | 74% | 70% | 80% | 94% | 100% | N/A |
| Median Annual Earnings for SWP Exiting Students | $47,419 | $45,238 | $38,588 | $39,912 | $39,815 | N/A |
| Median Change in Earnings for SWP Exiting Students | 23% | 24% | 48% | 62% | 125% | N/A |
| Exiting Students Who Attained the Living Wage | 52% | 55% | 57% | 51% | N/A | N/A |
| Source: Launchboard Strong Workforce Program Median of 2017 to 2020. |

## Skills, Certifications and Education

**Table 9. Top Skills for Aircraft Maintenance Technology Occupations in Bay Region (Apr 2021 - Mar 2022)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Repair | 191 | Lifting Ability | 34 |
| Aircraft Maintenance | 100 | Process Improvement | 32 |
| Avionics | 78 | Machinery | 29 |
| Scheduling | 67 | Personal Protective Equipment (PPE) | 29 |
| Hand Tools | 58 | Enterprise Resource Planning (ERP) | 28 |
| Quality Assurance and Control | 54 | Predictive / Preventative Maintenance | 28 |
| Customer Service | 46 | Soldering | 28 |
| Federal Aviation Regulations | 45 | Punch List | 27 |
| Wiring | 45 | Test Equipment | 27 |
| Occupational Health and Safety | 43 | Engineering Drawings | 25 |
| Project Management | 41 | Schematic Diagrams | 25 |
| Aviation Regulations | 40 | Surveillance | 25 |
| Power Tools | 40 | Basic Mathematics | 23 |
| Cleaning | 36 | Technical Support | 23 |
| Source: Burning Glass |

**Table 10. Certifications for Aircraft Maintenance Technology Occupations in Bay Region (Apr 2021 - Mar 2022)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Driver's License | 173 | Aircraft Mechanic Certification | 3 |
| Airframe and Powerplant (A and P) Certification | 70 | Pilot Certification | 2 |
| Security Clearance | 17 | Master Project Management | 2 |
| Automotive Service Excellence (ASE) Certification | 8 | Certified Flight Instructor (CFII) | 2 |
| Nccer Industrial Maintenance Mechanic | 7 | Airline Transport Pilot License | 2 |
| Maintenance Certification | 7 | Air Conditioning (AC) Certification | 2 |
| IPC Certification | 3 | Sheet Metal Certification | 1 |
| CompTIA Network+ | 3 | Registered Behavior Technician | 1 |
| Civil Engineering Certificate | 3 | Project Management Certification | 1 |
| CDL Class A | 3 | Production Certificate | 1 |
| Source: Burning Glass |

*Note: 51% of records have been excluded because they do not include a certification. As a result, the chart above may not be representative of the full sample.*

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

| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| --- | --- | --- |
| High school or vocational training | 203 | 85% |
| Associate's degree | 24 | 10% |
| Bachelor's degree | 13 | 5% |
| Source: Burning Glass |

*Note: 48% of records have been excluded because they do not include a degree level. As a result, the chart above 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