



Aircraft Powerplant Maintenance Technology Occupations Labor Market Information Report City College of San Francisco College

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

Based on all available data, there appears to be an “undersupply” of Aircraft Powerplant Maintenance Technology workers compared 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 169 students in the Bay region and 48 students in the Mid-Peninsula Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0950.20 - Aviation Powerplant 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 City College of San Francisco College and in the region.

This report profiles Aircraft Powerplant Maintenance Technology Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for a College/District program review at City College of San Francisco College.

- 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%

Occupational Demand

Table 1. Employment Outlook for Aircraft Powerplant Maintenance 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
Aircraft Mechanics and Service Technicians	2,520	2,611	91	4%	1,170	234	\$ 31.57	\$ 38.18
Total	2,520	2,611	91	4%	1,170	234	\$31.57	\$38.18

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 Aircraft Powerplant Maintenance Technology Occupations in Mid-Peninsula 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
Aircraft Mechanics and Service Technicians	753	767	14	2%	329	66	\$ 35.04	\$ 39.51
Total	753	767	14	2%	329	66	\$35.04	\$39.51

Source: EMSI 2020.4

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 (Feb 2020 - Jan 2021)

Occupation	Bay Region	Mid-Peninsula
Aircraft Mechanics and Service Technicians	182	59

Source: Burning Glass

Table 4a. Top Job Titles for Aircraft Powerplant Maintenance Technology Occupations for latest 12 months (Feb 2020 - Jan 2021) Bay Region

Title	Bay	Title	Bay
Aircraft Maintenance Technician	30	Fabricator Pre-Fab	3
Service Expert Seasonal	14	Code Developer - Computational Solid Mechanic	3
Aircraft Mechanic	6	A and P Mechanic	3
Technician W/Productive	4	Technician Exterior Aircraft Polish	2
A and P Aircraft Mechanic	4	Operation Services	2
Test Requisition	3	O&M Technician II W/ Grade II Wastewater Certification	2
Service Expert Night	3	Mobile Response Team - A And P Technician	2
Senior Vacuum Systems Designer	3	Lead - Rigging	2
Gse Mechanic	3	Helicopter Engine Technician A And P	2

Source: Burning Glass

Table 4b. Top Job Titles for Aircraft Powerplant Maintenance Technology Occupations for latest 12 months (Feb 2020 - Jan 2021) Mid-Peninsula Sub-Region

Title	Mid-Peninsula	Title	Mid-Peninsula
Aircraft Maintenance Technician	16	Structural Aircraft Mechanic I	1
Service Expert Seasonal	5	Service Expert Night	1
Gse Mechanic	3	Sales and Service Expert	1
Technician Exterior Aircraft Polish	2	Mobile Aircraft Technician	1
Lead - Rigging	2	Mechanic Opportunity W	1
Helicopter Engine Technician A and P	2	Line Aircraft Technician - Relocation Assistance	1
Helicopter Repairer	2	Lead Aircraft Maintenance Technician	1
Test Requisition	2	Lead A And P Mech	1
		Fuel Systems Mechanic	1

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Aircraft Powerplant Maintenance 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)
Federal Government, Military	823	832	1%	32%
Other Airport Operations	395	390	-1%	15%
Scheduled Passenger Air Transportation	371	357	-4%	14%
Other Support Activities for Air Transportation	197	196	0%	7%
Federal Government, Civilian, Excluding Postal Service	126	128	2%	5%
Other Aircraft Parts and Auxiliary Equipment Manufacturing	87	109	27%	4%
Nonscheduled Chartered Passenger Air Transportation	66	78	17%	3%
Guided Missile and Space Vehicle Manufacturing	60	60	-1%	2%
Couriers and Express Delivery Services	51	54	6%	2%
Temporary Help Services	35	31	-10%	1%

Source: EMSI 2020.4

Table 6. Top Employers Posting Aircraft Powerplant Maintenance Technology Occupations in Bay Region and Mid-Peninsula Sub-Region (Feb 2020 - Jan 2021)

Employer	Bay	Employer	Mid-Peninsula
24 Hour Fitness	21	24 Hour Fitness	7
Siemens	7	Akima Management Services	4
Akima Management Services	6	United Airlines	3
General Dynamics	4	Siemens	3
Cisco Systems Incorporated	4	Delta Air Lines	3
United Parcel Service Incorporated	3	Sfo Company	2
United Airlines	3	Menzies Aviation Plc	2
Pegasus	3	Amazon	2
Palo Alto Networks	3	Alaska Airlines	2
Lawrence Livermore National Laboratory	3	Advanced Helicopter Services	2
Delta Air Lines	3	Western Aircraft	1
Bombardier	3	Virgin America	1
Blue Mountain Air Incorporated	3	Thales Avionics Incorporated	1
Atp Flight School	3	Thales	1

Source: Burning Glass

Educational Supply

There are four (4) community colleges in the Bay Region issuing 65 awards on average annually (last 3 years ending 2018-19) on TOP 0950.20 - Aviation Powerplant Mechanics. In the Mid-Peninsula Sub-Region, there is a one (1) community college (CCSF) that issued 18 awards on average annually (last 3 years) on this TOP code.

Table 7a. Community College Awards on TOP 0950.20 - Aviation Powerplant Mechanics in Bay Region

College	Subregion	Associate	Certificate Low	Total
Alameda	East Bay	3	31	34
Gavilan	Silicon Valley	0	11	11

College	Subregion	Associate	Certificate Low	Total
San Francisco	Mid-Peninsula	9	9	18
Solano	North Bay	1	1	2
Total		13	52	65

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 234 annual openings for the Aircraft Powerplant Maintenance Technology occupational cluster and 65 annual (3-year average) awards for an annual undersupply of 169 students. In the Mid-Peninsula Sub-Region, there is also a gap with 66 annual openings and 18 annual (3-year average) awards for an annual undersupply of 48 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0950.20 - Aviation Powerplant Mechanics

Metric Outcomes	Bay All CTE Program	CCSF All CTE Program	State 0950.20	Bay 0950.20	Mid-Peninsula 0950.20	CCSF 0950.20
Students with a Job Closely Related to Their Field of Study*	75%	75%	82%	85%	N/A	N/A
Median Annual Earnings for SWP Exiting Students	\$45,864	\$51,060	\$40,996	\$43,212	N/A	N/A
Median Change in Earnings for SWP Exiting Students	31%	25%	52%	50%	N/A	N/A
Exiting Students Who Attained the Living Wage	53%	46%	62%	48%	N/A	N/A

Source: Launchboard Strong Workforce Program from version 2018-19).* Data from version 2017-18.

Skills, Certifications and Education

Table 9. Top Skills for Aircraft Powerplant Maintenance Technology Occupations in Bay Region (Feb 2020 - Jan 2021)

Skill	Posting	Skill	Posting
Repair	100	Test Equipment	15
Aircraft Maintenance	60	Federal Aviation Regulations	14
Scheduling	32	Electrical Systems	13
Power Tools	28	Engineering Drawings	13
Avionics	27	Lifting Ability	13
Schematic Diagrams	24	Machinery	13
Hand Tools	23	Cleaning	12
Technical Writing / Editing	21	Forklift Operation	12
Cardiopulmonary Resuscitation (CPR)	20	Occupational Health and Safety	12
Customer Service	20	Aerospace Industry Knowledge	10
Predictive / Preventative Maintenance	20	Maintenance Scheduling	10
Quality Assurance and Control	17	Airframe and Powerplant	9
Product Sales	16	Aviation Regulations	9
Personal Protective Equipment (PPE)	15	Wiring	9

Skill	Posting	Skill	Posting
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Source: Burning Glass

Table 10. Certifications for Aircraft Powerplant Maintenance Technology Occupations in the Bay Region (Feb 2020 - Jan 2021)

Certification	Posting	Certification	Posting
Driver's License	67	Pilot Certification	1
Airframe and Powerplant (A and P) Certification	28	Master Project Management	1
First Aid Cpr Aed	20	General Radiotelephone Operator License	1
Security Clearance	12	Civil Service Certification	1
SHRM Senior Certified Professional	3	Certified Private Pilot	1
SHRM Certified Professional (SHRM-CP)	3	Certified Health Education Specialist	1
Project Management Certification	2	Cdl Class C	1
Certified Salesforce Service Cloud Consultant	2	CDL Class A	1
Certified Salesforce Administrator	2	Board Certified/Board Eligible	1

Source: Burning Glass

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

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	83	92%
Associate's degree	7	8%

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 CCCCCO 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

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