



Firefighter Occupations Labor Market Information Report Hartnell 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 Firefighters compared to the demand for this occupation in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito and Santa Cruz counties). There is a projected annual gap of about 321 students in the Bay region and 74 students in the SC-Monterey Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 2133.00 - Fire 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 Hartnell College and in the region.

This report profiles Firefighter Occupations in the 12 county Bay region and in the SC-Monterey sub-region for a proposed new program at Hartnell College.

- Firefighters (33-2011):** Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.
 - Entry-Level Educational Requirement: Postsecondary nondegree award
 - Training Requirement: Long-term on-the-job training
 - Percentage of Community College Award Holders or Some Postsecondary Coursework: 60%

Occupational Demand

Table 1. Employment Outlook for Firefighter 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
Firefighters	8,351	8,762	411	5%	3,317	663	\$ 32.31	\$ 45.35
Total	8,351	8,762	411	5%	3,317	663	\$32.31	\$45.35

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 Firefighter Occupations in SC-Monterey 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
Firefighters	1,236	1,288	52	4%	488	98	\$ 21.87	\$ 27.91
Total	1,236	1,288	52	4%	488	98	\$21.87	\$27.91

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
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Source: EMSI 2020.4

SC-Monterey Sub-Region includes: Monterey, San Benito and Santa Cruz Counties

Job Postings in Bay Region and SC-Monterey Sub-Region

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

Occupation	Bay Region	SC-Monterey
Municipal Firefighters	139	8
Forest Firefighters	13	1

Source: Burning Glass

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

Title	Bay	Title	Bay
Firefighter	21	Reserve Firefighter	3
Firefighter/First Responder	14	Navy Firefighter	3
Firefighter Fire Department	9	Firefighter/Paramedic	3
U S Navy Firefighter Entry Level	6	Firefighter Paramedic Lateral	3
Firefighter Recruit	6	Firefighter II	3
Aircraft And Firefighting Specialist	6	Wildland Firefighter	2
Fire Response Specialist	5	Volunteer Board Members	2
Lateral Firefighter	4	Senior Fire Response Specialist	2
U S Navy Firefighter	3	Reserve Firefighter - Volunteer	2

Source: Burning Glass

Table 4b. Top Job Titles for Firefighter Occupations for latest 12 months (Mar 2020 - Feb 2021) SC-Monterey Sub-Region

Title	SC-Monterey
Reserve Firefighter - Volunteer	2
Firefighter	2
Firefighter/Paramedic	2
Firefighter Lateral	1
Firefighter - Entry Level/Lateral	1

Industry Concentration

Table 5. Industries hiring Firefighters 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)
Local Government, Excluding Education and Hospitals	7,663	7,953	4%	92%
All Other Support Services	139	149	7%	2%
State Government, Excluding Education and Hospitals	131	139	7%	2%
Federal Government, Civilian, Excluding Postal Service	89	92	3%	1%
Federal Government, Military	89	90	1%	1%
Convention and Trade Show Organizers	93	75	-20%	1%
Packaging and Labeling Services	64	71	10%	1%

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)
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Source: EMSI 2020.4

Table 6. Top Employers Posting Firefighter I Occupations in Bay Region and SC-Monterey Sub-Region (Mar 2020 - Feb 2021)

Employer	Bay	Employer	SC-Monterey
National Testing Network	9	City Santa Cruz	6
United States Marie Corps	6	City Salinas	2
Ntn	5	Umpqua Community College	1
Daily Dispatch	5	Seaside California	1
County Marin	4	City Watsonville	2
Tesla	5	City Salinas	2
City Santa Cruz	3	Umpqua Community College	1
Usn	2	Seaside California	1
Umpqua Community College	2		

Source: Burning Glass

Educational Supply

There are 11 community colleges in the Bay Region issuing 340 awards on average annually (last 3 years ending 2018-19) on TOP 2133.00 - Fire Technology. In the SC-Monterey Sub-Region, there are two (2) community colleges that issued 24 awards on average annually (last 3 years) on this TOP code.

Table 7a. Community College Awards on TOP 2133.00 - Fire Technology in Bay Region

College	Subregion	Associate	Certificate Low	Total
Cabrillo	SC-Monterey	18	1	19
Chabot	East Bay	14	2	16
Gavilan	Silicon Valley	0	6	6
Las Positas	East Bay	8	13	21
Los Medanos	East Bay	27	62	89
Mission	Silicon Valley	29	0	29
Monterey	SC-Monterey	2	3	5
San Francisco	Mid-Peninsula	14	43	57
San Mateo	Mid-Peninsula	22	12	34
Santa Rosa	North Bay	35	16	51
Solano	North Bay	10	3	13
Total		179	161	340

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 663 annual openings for Firefighters and 342 annual (3-year average) awards for an annual undersupply of 321 students. In the SC-Monterey Sub-Region, there is also a gap with 98 annual openings and 24 annual (3-year average) awards for an annual undersupply of 74 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 2133.00 - Fire Technology

Metric Outcomes	Bay All CTE Program	Hartnell All CTE Program	State 2133.00	Bay 2133.00	SC-Monterey 2133.00	Hartnell College 2133.00
% Employed Four Quarters After Exit	67%	81%	68%	78%	78%	N/A
Median Quarterly Earnings Two Quarters After Exit	\$11,466	\$19,867	\$15,834	17,149	\$29,088	N/A
Median % Change in Earnings	31%	23%	28%	33%	32%	N/A
% of Students Who Attained a Living Wage	53%	77%	71%	67%	86%	N/A

Source: Launchboard

Skills, Certifications and Education

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

Skill	Posting	Skill	Posting
Repair	53	Life Support	10
Fire Suppression	40	Occupational Health and Safety	10
HAZMAT	25	Public Health and Safety	10
Cardiopulmonary Resuscitation (CPR)	21	Self-Contained Breathing Apparatus (SCBA)	10
Advanced Cardiac Life Support (ACLS)	19	Hand Tools	9
Emergency Medical Care	19	Equipment Operation	8
Fire Protection	16	Incident Command System	8
Medical Emergencies	13	Training Programs	8
Personal Protective Equipment (PPE)	13	Equipment Maintenance	7
Power Tools	13	Lifting Ability	7
Cleaning	12	Medical Assistance	7
Network Testing	12	Patient Care	7
Prevention Activities	11	Safety Codes	7
Ventilation	11	Facebook	6

Source: Burning Glass

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

Certification	Posting	Certification	Posting
Emergency Medical Technician (EMT)	69	Pediatric Advanced Life Support (PALS) Certification	5
Certified Patient Account Technician	49	Basic Life Saving (BLS)	5
Fire Fighter I	47	HazMat Awareness	4
Driver's License	44	Fire Inspector I	4
Paramedic Certification	30	American Heart Association Certification	4
National Registry of Emergency Medical Technicians (NREMT)	11	Wildland Firefighter I	3
First Aid Cpr Aed	10	HazMat Technician	3
Firefighter II	10	HazMat Operations	3
Cdl Class C	7	Fire Inspector II	3

Certification	Posting	Certification	Posting
Advanced Cardiac Life Support (ACLS) Certification	7	Driver/Operator Pumper	3

Source: Burning Glass

Note: 43% 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 Firefighter Occupations in Bay Region

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	93	98%
Bachelor's degree	2	2%

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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