

# Emergency Medical Technician Occupations

# Labor Market Information Report

# Hartnell 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 Emergency Medical Technician workers compared to the demand for this cluster of occupations 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 68 students in the Bay region and 62 students in the SC-Monterey Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 1250.00 - Emergency Medical Services 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.

The Center of Excellence for Labor Market Research is well aware that the demand for Emergency Medical Technicians (EMTs) is not accurately reflected in the EMSI (traditional) labor market data. This is because labor market data for EMTs is not being provided as a separate occupation, but is combined with data for Paramedics. Also supply for EMTs may be combined with supply for Paramedics, which makes it difficult to know which students under TOP 1250.00 (Emergency Medical Services) are seeking employment as EMTs. In addition, many colleges in the region provide on-going training courses to incumbent EMTs, so many awards in the supply calculation should actually not be included since these awards are for currently employed workers and are irrelevant to determining if there is a gap between supply of new workers to fill job openings. For example, the public safety training center at Santa Rosa Junior College (SRJC) has a large number of currently employed police and fire workers who receive non-credit or low-unit certificate awards for ongoing training. SRJC on average annually issues 648 awards.

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

* **Emergency Medical Technicians and Paramedics (29-2041):** Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.  
    Entry-Level Educational Requirement: Postsecondary nondegree award  
    Training Requirement: None  
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 77%
* **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 Emergency Medical Technician 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** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Emergency Medical  Technicians and Paramedics | 5,538 | 5,892 | 354 | 6% | 2,328 | 466 | $ 14.17 | $ 18.38 |
| Firefighters | 8,351 | 8,762 | 411 | 5% | 3,317 | 663 | $ 32.31 | $ 45.35 |
| **Total** | **13,889** | **14,654** | **765** | **6%** | **5,645** | **1,129** | **$25.08** | **$34.60** |
| 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 Emergency Medical Technician 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** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Emergency Medical Technicians and Paramedics | 346 | 338 | -8 | -2% | 119 | 24 | $ 26.39 | $ 32.20 |
| Firefighters | 1,236 | 1,288 | 52 | 4% | 488 | 98 | $ 21.87 | $ 27.91 |
| **Total** | **1,582** | **1,626** | **44** | **3%** | **607** | **122** | **$22.86** | **$28.85** |
| 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 (Feb 2020 - Jan 2021)**

| **Occupation** | **Bay Region** | **SC-Monterey** |
| --- | --- | --- |
| Emergency Medical Technicians and Paramedics | 647 | 89 |
| Municipal Firefighters | 139 | 8 |
| Forest Firefighters | 13 | 1 |
| Source: Burning Glass | | |

**Table 4a. Top Job Titles for Emergency Medical Technician Occupations for latest 12 months (Feb 2020 - Jan 2021) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Emergency Medical Technician | 101 | Firefighter | 21 |
| Paramedic | 47 | EMT | 17 |
| Paramedic Basic In | 42 | Paramedic - Sign On In | 16 |
| Healthcare Specialist | 37 | Firefighter/First Responder | 14 |
| Paramedic | 26 | EMT/First Responder and Driver | 12 |
| EMT Basic | 35 | Firefighter Fire Department | 9 |
| Paramedic Basic | 22 | Fire Apparatus Engineer Paramedic | 9 |
|  |  | Flight Paramedic | 7 |
| Source: Burning Glass | | | |

**Table 4b. Top Job Titles for Emergency Medical Technician Occupations for latest 12 months (Feb 2020 - Jan 2021) SC-Monterey Sub-Region**

| **Title** | **SC-Monterey** | **Title** | **SC-Monterey** |
| --- | --- | --- | --- |
| Paramedic | 33 | Reserve Firefighter - Volunteer | 2 |
| Emergency Medical Technician | 22 | Paramedic Basic | 2 |
| EMT | 6 | Firefighter | 2 |
| EMT/First Responder And Driver | 4 | Fire Fighter II Paramedic | 2 |
| Flight Paramedic | 6 | Fire Apparatus Engineer Paramedic | 2 |
| Source: Burning Glass | | | |

## Industry Concentration

**Table 5. Industries hiring Emergency Medical Technician 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)** |
| --- | --- | --- | --- | --- |
| Local Government, Excluding Education and Hospitals | 8,917 | 9,259 | 4% | 64% |
| Ambulance Services | 3,139 | 3,183 | 1% | 22% |
| General Medical and Surgical Hospitals | 364 | 354 | -3% | 3% |
| Federal Government, Military | 330 | 333 | 1% | 2% |
| Hospitals (Local Government) | 224 | 254 | 13% | 2% |
| All Other Support Services | 153 | 165 | 8% | 1% |
| State Government, Excluding Education and Hospitals | 134 | 144 | 7% | 1% |
| Federal Government, Civilian, Excluding Postal Service | 94 | 97 | 3% | 1% |
| HMO Medical Centers | 87 | 109 | 25% | 1% |
| Convention and Trade Show Organizers | 105 | 85 | -20% | 1% |
| Source: EMSI 2020.4 | | | | |

**Table 6. Top Employers Posting Emergency Medical Technician Occupations in Bay Region and SC-Monterey Sub-Region (Feb 2020 - Jan 2021)**

| **Employer** | **Bay** | **Employer** | **SC-Monterey** |
| --- | --- | --- | --- |
| American Medical Response | 55 | Global Medical Response | 12 |
| Global Medical Response | 81 | American Medical Response | 11 |
| Emergency Medical Services Authority | 22 | Global Medical Response, Inc | 10 |
| AMR | 21 | Emergency Medical Services Authority | 7 |
| Lifeguard Air Ambulance | 16 | Central Coast Ambulance | 5 |
| Royal Ambulance Service | 14 | Camp Recovery Center | 5 |
| Norcal Ambulance | 12 | Rural Metro Corporation | 3 |
| Central Coast Ambulance | 12 | Mccormick Ambulance | 3 |
| Falck Usa | 10 | Lifeguard Air Ambulance | 3 |
|  |  | City Santa Cruz | 3 |
| Source: Burning Glass | | | |

## Educational Supply

There are 10 community colleges in the Bay Region issuing 995 awards on average annually (last 3 years ending 2018-19) on TOP 1250.00 - Emergency Medical Services. In the SC-Monterey Sub-Region, there is one (1) community college that issued 60 awards on average annually (last 3 years) on this TOP code.

There are a three (3) other CTE educational institutions in the Bay Region issuing 66 awards on average annually (last 3 years ending 2016-17) on TOP 1250.00 - Emergency Medical Services. There are no other CTE educational institutions in the SC-Monterey Sub-Region issuing awards on average annually (last 3 years) on this TOP code.

**Table 7a. Community College Awards on TOP 1250.00 - Emergency Medical Services in Bay Region**

| **College** | **Subregion** | **Certificate Low** | **Noncredit** | **Total** |
| --- | --- | --- | --- | --- |
| Contra Costa | East Bay | 1 | 0 | 1 |
| Foothill | Silicon Valley | 54 | 12 | 66 |
| Las Positas | East Bay | 1 | 4 | 5 |
| Los Medanos | East Bay | 82 | 0 | 82 |
| Merritt | East Bay | 2 | 0 | 2 |
| Monterey | SC-Monterey | 60 | 0 | 60 |
| San Francisco | Mid-Peninsula | 3 | 0 | 3 |
| Santa Rosa | North Bay | 154 | 494 | 648 |
| Skyline | Mid-Peninsula | 49 | 0 | 49 |
| Solano | North Bay | 79 | 0 | 79 |
| **Total** |  | **485** | **510** | **995** |

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

**Table 7b. Other CTE Instituton Awards on TOP 1250.00 - Emergency Medical Services in Bay Region**

| **College** | **Subregion** | **Associate Degree** | **Award < 1 academic yr** | **Award 1 < 2 academic yrs** | **Bachelor's Degree** | **Total** |
| --- | --- | --- | --- | --- | --- | --- |
| Mt. Diablo Adult Education-Mt. Diablo USD | East Bay | 0 | 14 | 0 | 0 | 14 |
| Pacific Union College | North Bay | 7 | 0 | 0 | 2 | 9 |
| WestMed College | Silicon Valley | 0 | 0 | 43 | 0 | 43 |
| **Total** |  | **7** | **14** | **43** | **2** | **66** |
| 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 1,129 annual openings for the Emergency Medical Technician occupational cluster and 1,061 annual (3-year average) awards for an annual undersupply of 68 students. In the SC-Monterey Sub-Region, there is also a gap with 122 annual openings and 60 annual (3-year average) awards for an annual undersupply of 62 students.

The Center of Excellence for Labor Market Research is well aware that the demand for Emergency Medical Technicians (EMTs) is not accurately reflected in the EMSI (traditional) labor market data. This is because labor market data for EMTs is not being provided as a separate occupation, but is combined with data for Paramedics. Also supply for EMTs may be combined with supply for Paramedics, which makes it difficult to know which students under TOP 1250.00 (Emergency Medical Services) are seeking employment as EMTs. In addition, many colleges in the region provide on-going training courses to incumbent EMTs, so many awards in the supply calculation should actually not be included since these awards are for currently employed workers and are irrelevant to determining if there is a gap between supply of new workers to fill job openings. For example, the public safety training center at Santa Rosa Junior College (SRJC) has a large number of currently employed police and fire workers who receive non-credit or low-unit certificate awards for ongoing training. SRJC on average annually issues 648 awards.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1250.00 - Emergency Medical Services**

| **Metric Outcomes** | **Bay**  **All CTE Program** | **Hartnell**  **All CTE Program** | **State 1250.00** | **Bay 1250.00** | **SC-Monterey 1250.00** | **Hartnell 1250.00** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to  Their Field of Study\* | 75% | 63% | 68% | 74% | 67% | N/A |
| Median Annual Earnings for SWP  Exiting Students | $45,864 | $90,992 | $29,060 | $36,504 | $34,580 | $38,386 |
| Median Change in Earnings for SWP  Exiting Students | 31% | 13% | 37% | 34% | 134% | N/A |
| Exiting Students Who Attained the  Living Wage | 53% | 77% | 48% | 44% | 58% | 58% |
| Source: Launchboard Strong Workforce Program from version 2018-19).\* Data from version 2017-18 | | | | | | |

## Skills, Certifications and Education

**Table 9. Top Skills for Emergency Medical Technician Occupations in Bay Region (Feb 2020 - Jan 2021)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Patient Care | 402 | Life Support | 109 |
| Cardiopulmonary Resuscitation (CPR) | 341 | Hepatitis B | 98 |
| Advanced Cardiac Life Support (ACLS) | 246 | Basic Trauma Life Support (BTLS) | 95 |
| Public Health and Safety | 191 | Measles Mumps Rubella (MMR) | 82 |
| Hoisting Equipment | 170 | Varicella | 76 |
| Customer Billing | 160 | Emergency Care | 74 |
| Information Systems | 150 | Vaccines | 72 |
| Electrocardiogram (EKG / ECG) | 146 | Customer Service | 70 |
| Medical Triage | 140 | Vaccination | 67 |
| Customer Contact | 137 | Chickenpox | 66 |
| Motor Vehicle Operation | 132 | Influenza | 66 |
| Community Relations | 131 | HAZMAT | 63 |
| Patient Interviewing | 129 | Occupational Health and Safety | 63 |
| Assisted Living | 127 | Patient Transportation and Transfer | 63 |
| Source: Burning Glass | | | |

**Table 10. Certifications for Emergency Medical Technician Occupations in Bay Region (Feb 2020 - Jan 2021)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Emergency Medical Technician (EMT) | 476 | American Heart Association Certification | 57 |
| Driver's License | 402 | First Aid Cpr Aed | 40 |
| Advanced Cardiac Life Support (ACLS) Certification | 212 | Firefighter II | 16 |
| Paramedic Certification | 182 | Emergency Vehicle Operator | 16 |
| National Registry of Emergency Medical Technicians (NREMT) | 149 | Security Clearance | 8 |
| Medical Examiner's License | 127 | Cdl Class C | 7 |
| Basic Life Saving (BLS) | 100 | Phlebotomy Certification | 6 |
| Basic Cardiac Life Support Certification | 83 | Pediatric Advanced Life Support (PALS) Certification | 5 |
| Fire Fighter I | 64 | Combat Medic Certificate | 5 |
| Certified Patient Account Technician | 63 | Certified Residential Medication Aide | 5 |
| Source: Burning Glass | | | |

**Table 11. Education Requirements for Emergency Medical Technician Occupations in Bay Region**

| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| --- | --- | --- |
| High school or vocational training | 409 | 97% |
| Associate's degree | 14 | 3% |
| 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/  
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](mailto:leila@baccc.net)

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