

**Labor Market Analysis for Program Recommendation**

**Emergency Medical Services Occupations**

**Chabot College**

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

**December 2022**

## Recommendation

Based on all available data, there appears to be an “undersupply” of Emergency Medical Services 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 416 students in the Bay region and 353 students in the East Bay 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 Chabot College and in the region.

This report profiles Emergency Medical Services Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new certificate and Associate Degree program at Chabot College.

Chabot College provided the following additional information for this report: “Chabot selected Emergency Department Technician as an occupation, but no SOC code exists yet for this emerging occupation. Many Emergency Departments in California hire "Emergency Department Technicians" (or emergency room technicians, or patient care technicians in the emergency room). There is no SOC or TOP/CIP codes for this specific job; however, our communities of interest, regional emergency departments, and employers frequently advertise for this position, requiring EMT plus phlebotomy (and ECG). We are developing a certificate program for students who wish to obtain employment as an Emergency Department technician.”

* **Emergency Medical Technicians (29-2042):** Assess injuries and illnesses and administer basic emergency medical care. May 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: NA%
* **Paramedics (29-2043):** Administer basic or advanced emergency medical care and assess injuries and illnesses. May administer medication intravenously, use equipment such as EKGs, or administer advanced life support to sick or injured individuals.
  Entry-Level Educational Requirement: Postsecondary nondegree award
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: NA%
* **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%
* **Ambulance Drivers and Attendants, Except Emergency Medical Technicians (53-3011):** Drive ambulance or assist ambulance driver in transporting sick, injured, or convalescent persons. Assist in lifting patients.
  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: 32%

## Occupational Demand

**Table 1. Employment Outlook for Emergency Medical Services Occupations in Bay Region**

| **Occupation** | **2021 Jobs** | **2026 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Emergency Medical Technicians | 4,903 | 5,344 | 441 | 9% | 2,144 | 429 | $17 | $20 |
| Paramedics | 2,243 | 2,509 | 265 | 12% | 1,038 | 208 | $21 | $25 |
| Firefighters | 6,895 | 7,121 | 226 | 3% | 2,830 | 566 | $36 | $44 |
| Ambulance Drivers and Attendants, Except Emergency Medical Technicians | 96 | 146 | 50 | 52% | 113 | 23 | $15 | $17 |
| **Total** | **14,138** | **15,120** | **982** | **7%** | **6,126** | **1,226** |  |  |
| Source: Lightcast 2022.4 |
| **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 Services Occupations in East Bay Sub-region**

| **Occupation** | **2021 Jobs** | **2026 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Emergency Medical Technicians | 1,971 | 2,136 | 165 | 8% | 831 | 166 | $16 | $19 |
| Paramedics | 443 | 500 | 57 | 13% | 209 | 42 | $25 | $28 |
| Firefighters | 1,961 | 1,981 | 21 | 1% | 753 | 151 | $39 | $44 |
| Ambulance Drivers and Attendants, Except Emergency Medical Technicians | 36 | 46 | 11 | 29% | 33 | 7 | $15 | $16 |
| **Total** | **4,410** | **4,664** | **253** | **6%** | **1,826** | **366** |  |  |
| Source: Lightcast 2022.4 |
| **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 (Dec. 2021 - Nov. 2022)**

| **Occupation** | **Bay Region** | **East Bay** |
| --- | --- | --- |
| Emergency Medical Technicians | 782 | 278 |
| Paramedics | 210 | 41 |
| Firefighters | 142 | 35 |
| Ambulance Drivers and Attendants, Except Emergency Medical Technicians | 4 | 2 |
| Source: Lightcast |

**Table 4a. Top Job Titles for Emergency Medical Services Occupations for latest 12 months (Dec. 2021 - Nov. 2022) - Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Emergency Medical Technicians | 384 | Emergency Medical Responders | 15 |
| Emergency Medical Technicians - Basic | 180 | Emergency Medical Technician Instructors | 15 |
| Paramedics | 87 | Firefighters/First Responders | 15 |
| Firefighters | 56 | Hospital Corpsmen | 13 |
| Paramedic Instructors | 39 | Firefighter Engineers | 11 |
| Firefighters/Paramedics | 38 | Reserve Firefighters | 9 |
| Emergency Medical Technician/Paramedics | 18 | Vaccine Specialists | 9 |
| Flight Paramedics | 18 |  |  |
| Source: Lightcast**Table 4b. Top Job Titles for Emergency Medical Services Occupations for latest 12 months (Dec. 2021 - Nov. 2022) - East Bay Sub-Region** |

| **Title** | **East Bay** | **Title** | **East Bay** |
| --- | --- | --- | --- |
| Emergency Medical Technicians | 129 | EMTs/ Paramedics | 6 |
| Emergency Medical Technicians - Basic | 87 | Reserve Firefighters | 5 |
| Firefighters | 14 | Ambulance Driver/EMTs  | 4 |
| Paramedics | 14 | Ambulance Drivers | 2 |
| Paramedic Instructors | 13 | Damage Controlmen | 2 |
| Firefighters/Paramedics | 10 | Deployment Managers | 2 |
| Hospital Corpsmen | 10 |  |  |
| Source: Lightcast |

## Industry Concentration

**Table 5. Industries hiring Emergency Medical Services Workers in Bay Region**

| **Industry - 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2021)** | **Jobs in Industry (2026)** | **% Change (2021-26)** | **% Occupation Group in Industry (2021)** |
| --- | --- | --- | --- | --- |
| Local Government, Excluding Education and Hospitals | 8,141 | 248 | 48% | 5% |
| Ambulance Services | 3,452 | 509 | 20% | 72% |
| Scheduled Passenger Air Transportation | 2,070 | -630 | 12% | 17% |
| Federal Government, Military | 913 | 19 | 5% | 3% |
| General Medical and Surgical Hospitals | 576 | 7 | 3% | 1% |
| Hospitals (Local Government) | 339 | 32 | 2% | 1% |
| HMO Medical Centers | 240 | 36 | 1% | 1% |
| All Other Support Services | 225 | 39 | 1% | 6% |
| Federal Government, Civilian, Excluding Postal Service | 134 | -1 | 1% | 0% |
| State Government, Excluding Education and Hospitals | 103 | 6 | 1% | 0% |
| Source: Lightcast 2022.4**Table 6. Top Employers Posting Emergency Medical Services Occupations in Bay Region and East Bay Sub-Region (Dec. 2021 - Nov. 2022)** |

| **Employer** | **Bay** | **Employer** | **East Bay** |
| --- | --- | --- | --- |
| Global Medical Response | 172 | Covid Clinic | 46 |
| Covid Clinic | 95 | Global Medical Response | 31 |
| Norcal Ambulance | 52 | Norcal Ambulance | 19 |
| AMR | 51 | AMR | 15 |
| Falcon Critical Care Transport | 22 | Falck Northern California | 13 |
| Joffe Emergency Services | 18 | Falcon Critical Care Transport | 13 |
| Protransport-1 | 18 | Protransport-1 | 12 |
| Visit Healthcare | 18 | Eagle Ambulance | 11 |
| United Ambulance Service | 17 | BrightStar Care | 10 |
| Westmed Ambulance Service | 16 | Westmed Ambulance Service | 10 |
| Source: Lightcast |

## Educational Supply

There are eight (8) community colleges in the Bay Region issuing 798 awards on average annually (last 3 years ending 2020-21) on TOP 1250.00 Emergency Medical Services. In the East Bay Sub-Region, there are three (3) community colleges that issued 12 awards on average annually (last 3 years) on this TOP code.

There is one (1) other CTE educational institutions in the Bay Region issuing 12 awards on average annually (last 3 years ending 2019-20) on 51.0904 Emergency Medical Technology/Technician (EMT Paramedic). There are no other CTE educational institution in the East Bay 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** | **High unit Certificate** | **Low unit Certificate** | **Total** |
| --- | --- | --- | --- | --- |
| Contra Costa | East Bay | 0 | 1 | 1 |
| Las Positas | East Bay | 0 | 9 | 9 |
| Merritt | East Bay | 0 | 2 | 2 |
| Monterey | SC-Monterey | 8 | 21 | 29 |
| San Francisco | Mid-Peninsula | 0 | 35 | 35 |
| Santa Rosa | North Bay | 0 | 636 | 636 |
| Skyline | Mid-Peninsula | 0 | 55 | 55 |
| Solano | North Bay | 0 | 31 | 31 |
| **Total** |  | **8** | **790** | **798** |
| Source: Data Mart |
| Note: The annual average for awards is 2017-18 to 2019-20. |

| **College** | **Subregion** | **Associate Degree** | **Bachelor's degree** | **Total** |
| --- | --- | --- | --- | --- |
| Pacific Union College | North Bay | 6 | 6 | 12 |
| **Total** |  | **6** | **6** | **12** |
| Source: Data Mart |
| Note: The annual average for awards is 2017-18 to 2019-20. |

**Table 7b. Other CTE Institutions Awards on 51.0904 Emergency Medical Technology/Technician (EMT Paramedic) in Bay Region**

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## Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 1,226 annual openings for the Emergency Medical Services occupational cluster and 810 annual (3-year average) awards for an annual undersupply of 416 students. In the East Bay Sub-Region, there is also a gap with 366 annual openings and 13 annual (3-year average) awards for an annual undersupply of 353 students.

## 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 Programs** | **Chabot All CTE Programs** | **State 1250.00** | **Bay 1250.00** | **East Bay 1250.00** | **Chabot 1250.00** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study | 74% | 75% | 68% | 71% | 77% | 100% |
| Median Annual Earnings for SWP Exiting Students | $47,419 | $42,932 | $31,238 | $39,260 | $36,766 | $39,638 |
| Median Change in Earnings for SWP Exiting Students | 23% | 32% | 28% | 25% | 22% | 21% |
| Exiting Students Who Attained the Living Wage | 52% | 55% | 46% | 45% | 44% | 52% |
| Source: Launchboard Strong Workforce Program Median of 2017 to 2020. |

## Skills, Certifications and Education

**Table 9. Top Skills for Emergency Medical Services Occupations in Bay Region (Dec. 2021 - Nov. 2022)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Emergency Medical Services | 787 | Medical Assistance | 116 |
| Cardiopulmonary Resuscitation (CPR) | 511 | Health Assessment | 113 |
| Ambulances | 466 | Standard Operating Procedure | 111 |
| Billing | 204 | Triage | 107 |
| Critical Care | 188 | Medical Guideline | 106 |
| Prescription Labeling | 181 | Defibrillation | 105 |
| Emergency Response | 160 | Intravenous Hydration | 101 |
| Firefighting | 152 | Number Systems | 101 |
| Electrocardiography | 123 | Medical Equipment | 100 |
| Medical Direction | 119 | Dispatching | 99 |
| Source: Lightcast |

**Table 10. Certifications for Emergency Medical Services Occupations in Bay Region (Dec. 2021 - Nov. 2022)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Basic Life Support (BLS) Certification | 507 | Firefighter II Certification | 19 |
| Advanced Cardiovascular Life Support (ACLS) Certification | 161 | CDL Class C License | 17 |
| Pediatric Advanced Life Support | 161 | Emergency Medical Responder | 16 |
| National Registry Emergency Medical Technician | 160 | Adult Trauma Life Support | 15 |
| Advanced Life Support | 140 | Certified Nursing Assistant | 13 |
| Certified Cardiographic Technician | 105 | Hazardous Materials Certification - Operations Level | 9 |
| Basic Trauma Life Support (BTLS) | 82 | Hazardous Materials Certification - Technician Level | 8 |
| Basic Cardiac Life Support | 78 | Registered Vascular Technologist | 8 |
| Firefighter I Certification | 59 | Advanced Emergency Medical Technician (AEMT) | 7 |
| Certified First Responder | 55 | Licensed Vocational Nurses | 7 |
| Source: Lightcast |

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

| **Education Level** | **Job Postings** | **% of Total** |
| --- | --- | --- |
| High school or GED | 602 | 78% |
| Associate degree | 94 | 12% |
| Bachelor's degree & higher | 72 | 10% |
| Source: Lightcast |
| Note: 43% 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 job descriptions and skills listed in O\*Net. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCO Data Mart and CTE Launchboard.

## Sources

O\*Net Online
Lightcast
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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