

Labor Market Analysis for Program Recommendation

Emergency Department Technician Occupations

City College of San Francisco

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research
October 2022

Recommendation

Based on all available data, there appears to be an “undersupply” of Emergency Department Technician workers compared to the demand for this cluster of occupations in the Bay region and in the Mid-Peninsula sub-region (San Francisco, San Mateo counties). There is a projected annual gap of about 4,184 students in the Bay region and 1,173 students in the Mid-Peninsula 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 City College of San Francisco College and in the region.

This report profiles Emergency Department Technician Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for a proposed new program at City College of San Francisco.

- **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%
- **Health Technologists and Technicians, All Other (29-2099):** NA
Entry-Level Educational Requirement: Postsecondary nondegree award
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: NA%
- **Medical Assistants (31-9092):** Perform administrative and certain clinical duties under the direction of a physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as

directed by physician. Excludes “Physician Assistants” (29-1071).

Entry-Level Educational Requirement: Postsecondary nondegree award

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 66%

- **Phlebotomists (31-9097):** Draw blood for tests, transfusions, donations, or research. May explain the procedure to patients and assist in the recovery of patients with adverse reactions.

Entry-Level Educational Requirement: Postsecondary nondegree award

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 62%

Occupational Demand

Table 1. Employment Outlook for Emergency Department Technician 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
Emergency Medical Technicians	4,741	5,284	544	11%	2,358	472	\$17	\$20
Paramedics	1,917	2,476	558	29%	1,358	272	\$21	\$25
Health Technologists and Technicians, All Other	4,972	6,135	1,164	23%	3,166	633	\$22	\$28
Medical Assistants	23,485	26,946	3,461	15%	18,103	3,621	\$20	\$25
Phlebotomists	2,424	2,880	456	19%	2,153	431	\$21	\$24
Total	37,538	43,722	6,184	16%	27,138	5,429		

Source: EMSI 2022.3

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 Emergency Department Technician Occupations in Mid-Peninsula 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
Emergency Medical Technicians	822	828	6	1%	298	60	\$18	\$22
Paramedics	205	201	-4	-2%	70	14	\$29	\$30
Health Technologists and Technicians, All Other	941	1,255	314	33%	709	142	\$24	\$30
Medical Assistants	4,852	6,036	1,184	24%	4,349	870	\$22	\$28
Phlebotomists	667	1,089	422	63%	928	186	\$23	\$24
Total	7,488	9,410	1,923	26%	6,354	1,272		

Source: EMSI 2022.3

Mid-Peninsula Sub-Region includes: San Francisco, 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

Occupation	Bay Region	Mid-Peninsula
Medical Assistants	7,797	1,869
Health Technologists and Technicians, All Other	6,978	1,331
Phlebotomists	2,318	540
Emergency Medical Technicians and Paramedics	1,260	239

Source: Burning Glass

Table 4a. Top Job Titles for Emergency Department Technician Occupations for latest 12 months - Bay Region

Title	Bay	Title	Bay
Medical Assistant	2,572	Med Technician	114
Phlebotomist	673	Medical Assistant I	112
Behavior Technician	548	Phlebotomist I/Greeter	110
Aba Behavior Technician	517	Medical Assistant II	102
Registered Behavior Technician	449	Phlebotomist I	94
Emergency Medical Technician	308	Paramedic	83
Mobile Phlebotomist	185	Medical Assistant - Urgent Care	79

Source: Burning Glass

Table 4b. Top Job Titles for Emergency Department Technician Occupations for latest 12 months - Mid-Peninsula Sub-Region

Title	Mid-Peninsula	Title	Mid-Peninsula
Medical Assistant	703	Phlebotomy Technician	26
Phlebotomist	190	Behavior Technician Bt	25
Registered Behavior Technician	86	Medical Assistant - Urgent Care	24
Aba Behavior Technician	63	Phlebotomist I	23
Behavior Technician	61	Paramedic	20
Mobile Phlebotomist	59	Med Technician	18
Emergency Medical Technician	40	Certified Medical Assistant	17
Medical Assistant II	28		

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Emergency Department Technician 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)
Offices of Physicians (except Mental Health Specialists)	9,470	10,686	13%	26%
HMO Medical Centers	6,938	8,668	25%	19%
General Medical and Surgical Hospitals	3,886	3,692	-5%	9%
Ambulance Services	3,438	3,883	13%	9%
Local Government, Excluding Education and Hospitals	1,886	2,092	11%	5%
Hospitals (Local Government)	1,540	1,868	21%	4%
Freestanding Ambulatory Surgical and Emergency Centers	1,076	1,503	40%	3%
Medical Laboratories	993	1,565	58%	3%
All Other Outpatient Care Centers	966	1,446	50%	3%
Offices of Chiropractors	652	778	19%	2%

Source: EMSI 2022.3

Table 6. Top Employers Posting Emergency Department Technician Occupations in Bay Region and Mid-Peninsula Sub-Region

Employer	Bay	Employer	Mid-Peninsula
Sutter Health	1,218	Sutter Health	325
Elemy	622	Elemy	142
Quest Diagnostics Inc.	448	Kaiser Permanente	70
Kaiser Permanente	343	University of California	67
Comprehensive Educational Services	311	Quest Diagnostics Inc.	49
Amr	218	Comprehensive Educational Services	38
Concentra	181	Carbon Health	38
Clean Harbors	160	Aya Healthcare	38
Laboratory Corporation of America	152	UCSF Medical Center	36
Lucile Packard Children's Hospital	149	Concentra	31

Source: Burning Glass

Educational Supply

There 11 community colleges in the Bay Region issuing 1,239 awards on average annually (last 3 years ending 2018-19) on TOP 1250.00 Emergency Medical Services. In the Mid-Peninsula Sub-Region, there are two (2) community colleges that issued 99 awards on average annually (last 3 years) on this TOP code.

There is one (1) other CTE educational institution in the Bay Region issuing six (6) awards on average annually (last 3 years ending 2019-20) on TOP 1250.00 Emergency Medical Services. There are no other CTE educational institutions in the Mid-Peninsula 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 and CIP 51.0904 in Bay Region

College	Subregion	Associate Degree	Award < 1 academic yr	Award 1 < 2 academic yrs	Total
City College of San Francisco	Mid-Peninsula	4	15	18	37
Contra Costa College	East Bay	0	1	0	1
Foothill College	Silicon Valley	23	0	7	30
Las Positas College	East Bay	2	16	5	23
Los Medanos College	East Bay	0	65	0	65
Merritt College	East Bay	0	3	0	3
Monterey Peninsula College	SC-Monterey	0	36	24	60
Napa Valley College	North Bay	3	0	13	16
Santa Rosa Junior College	North Bay	6	503	380	889
Skyline College	Mid-Peninsula	0	62	0	62
Solano Community College	North Bay	0	53	0	53
Total		38	754	447	1,239

Note: The annual average for awards is 2017-18 to 2019-20.

Table 7b. Other CTE Institution Awards on TOP 1250.00 - Emergency Medical Services and CIP 51.0904 in Bay Region

College	Subregion	Associate Degree	Total
Pacific Union College	North Bay	6	6
Total		6	6

Note: The annual average for awards is 2017-18 to 2019-20.

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 5,429 annual openings for the Emergency Department Technician occupational cluster and 1,245 annual (3-year average) awards for an annual undersupply of 4,184 students. In the Mid-Peninsula Sub-Region, there is also a gap with 1,272 annual openings and 99 annual (3-year average) awards for an annual undersupply of 1,173 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	CCSF All CTE Programs	State 1250.00	Bay 1250.00	Mid- Peninsula 1250.00	CCSF 1250.00
Students with a Job Closely Related to Their Field of Study	74%	72%	68%	71%	59%	62%
Median Annual Earnings for SWP Exiting Students	\$47,419	\$52,800	\$31,238	\$39,260	\$38,834	\$39,626
Median Change in Earnings for SWP Exiting Students	23%	18%	28%	25%	20%	34%
Exiting Students Who Attained the Living Wage	52%	48%	46%	45%	26%	27%

Source: Launchboard Strong Workforce Program Median of 2017 to 2020.

Skills, Certifications and Education

Table 9. Top Skills for Emergency Department Technician Occupations in Bay Region

Skill	Posting	Skill	Posting
Patient Care	4,736	Autism Diagnosis/Treatment/Care	1,631
Scheduling	3,738	Data Entry	1,579
Phlebotomy	3,733	Electronic Medical Records	1,556
Vital Signs Measurement	3,584	Venipuncture	1,552
Medical Assistance	3,387	Behavior Analysis	1,481
Cardiopulmonary Resuscitation (CPR)	2,785	Patient Assistance	1,433
Customer Service	2,774	Customer Billing	1,325
Vaccination	2,646	Cleaning	1,283
Appointment Setting	2,319	Blood Draws	1,246
Injections	2,242	Occupational Health and Safety	1,189
Life Support	1,992	Medical Terminology	1,160
Patient Preparation	1,854	Medical Coding	1,158
Electrocardiogram (EKG / ECG)	1,740	Patient/Family Education and Instruction	1,113
Specimen Collection	1,717	Patient Treatment	1,107

Source: Burning Glass

Table 10. Certifications for Emergency Department Technician Occupations in the Bay Region

Certification	Posting	Certification	Posting
Basic Life Saving (BLS)	4,063	Board Certified Behavior Analyst (BCBA)	993
Driver's License	3,756	Clinical Medical Assistant (CCMA)	512
Certified Medical Assistant	3,065	Licensed Vocational Nurse (LVN)	457
Basic Cardiac Life Support Certification	2,829	Advanced Cardiac Life Support (ACLS) Certification	420
Registered Behavior Technician	2,160	Certified Nursing Assistant	351
Phlebotomy Certification	1,997	Certified Registered Nurse Practitioner	332
First Aid Cpr Aed	1,583	Paramedic Certification	316
Emergency Medical Technician (EMT)	1,502	American Registry of Radiologic Technologists (ARRT) Certification	260
American Heart Association Certification	1,402	Registered Medical Assistant	258
AAMA Certified Medical Assistant	1,207	Medical Terminology Certification	180

Source: Burning Glass

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

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	9,839	90%
Associate's degree	633	6%
Bachelor's degree and higher	509	4%

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

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