

Cardiovascular Technologists and Technicians Labor Market Information Report City College of San Francisco

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 Cardiovascular Technologists and Technicians compared to the demand for this occupation in the Bay region. There is a projected annual gap of about 61 students in the Bay region. Because CCSF is the only community college in the region issuing awards on this TOP code, the gap analysis for the Mid-Peninsula Sub-Region is not relevant. CCSF's program supply is the only supply in the region.

This report also provides student outcomes data on employment and earnings for programs on TOP 1213.00 - Cardiovascular Technician 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 (CCSF) and in the region.

Introduction

This report profiles Cardiovascular Technologists and Technicians in the 12 county Bay region and in the Mid-Peninsula sub-region for the review and modification of an existing program at City College of San Francisco.

- **Cardiovascular Technologists and Technicians (SOC 29-2031):** Conduct tests on pulmonary or cardiovascular systems of patients for diagnostic purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, pulmonary functions, lung capacity, and similar tests. Includes vascular technologists.

Entry-Level Educational Requirement: Associate's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 60%

Occupational Demand

Table 1. Employment Outlook for Cardiovascular Technologists and Technicians in Bay Region

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	10% Hourly Wage	Median Hourly Wage
Cardiovascular Technologists and Technicians	1,035	1,099	65	6%	340	68	\$18.39	\$33.82

Source: EMSI 2019.1

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 Cardiovascular Technologists and Technicians in Mid-Peninsula Sub-Region

Occupation	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	10% Hourly Wage	Median Hourly Wage
Cardiovascular Technologists and Technicians	227	250	22	10%	82	16	\$22.00	\$51.08

Cardiovascular Technologists and Technicians in 12 County Bay Region and in Mid-Peninsula Sub-Region, 2019

Source: EMSI 2019.1

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 (March 2018 - Feb 2019)

Occupation	Bay Region	Mid-Peninsula
Cardiovascular Technologists and Technicians	963	288

Source: Burning Glass

Table 4. Top Job Titles for Cardiovascular Technologists and Technicians for latest 12 months (March 2018 - Feb 2019)

Common Title	Bay	Mid-Peninsula	Common Title	Bay	Mid-Peninsula
EKG Technician	83	31	Radiology Technician	13	6
Catheterization Laboratory Technician	79	18	Cardiovascular Technician	12	1
Laboratory Technologist	59	18	Perfusionist	12	0
Behavior Technician	57	12	Cardiovascular Specialist	11	2
Echo Technician	29	11	Cardiac Specialist	10	9
Monitor Technician	29	6	Pcu/Imc/Stepdown	10	0
Behavior Technician, Behavior	22	12	Cardiovascular Technologist	9	1
Cardiovascular Interventional Technologist	18	5	Echocardiographer	9	1
Sonographer	17	3	Monitor	9	2
Cardiac Monitor Technician	16	10	CT Technologist	8	2
Cardiac Technician	16	7	Cvor Cst/St, Cardiovascular	8	4
Cath Laboratory	16	5	Travel Echo Technician	8	4
Event Technician	14	12	Vascular Technologist	8	0

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Cardiovascular Technologists and Technicians in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2017)	Jobs in Industry (2022)	% Change (2017-22)	% in Industry (2017)
General Medical and Surgical Hospitals (622110)	567	567	(1%)	54.4%
Hospitals (Local Government) (903622)	168	171	11%	16.4%
Offices of Physicians (except Mental Health Specialists) (621111)	94	94	1%	9.0%
HMO Medical Centers (621491)	58	58	26%	5.6%
Medical Laboratories (621511)	30	31	33%	2.9%
Hospitals (State Government) (902622)	30	29	27%	2.8%

Source: EMSI 2019.1

Table 6. Top Employers Posting Jobs for Cardiovascular Technologists and Technicians in Bay Region and Mid-Peninsula Sub-Region (March 2018 - Feb 2019)

Employer	Bay	Employer	Bay	Employer	Mid-Peninsula
Kaiser Permanente	33	Santa Cruz City Schools	9	Ican B Applied Behavior Analysis	12
Sutter Health	21	Biotelemetry	8	Biotelemetry	8
Hospital Corporation of America	19	Dignity Health	8	Seton Medical Center	8

Cardiovascular Technologists and Technicians in 12 County Bay Region and in Mid-Peninsula Sub-Region, 2019

Santa Rosa City Schools	19	El Camino Hospital	8	Dignity Health	7
Ican B Applied Behavior Analysis	16	Seton Medical Center	8	Sutter Health	7
Sutter Medical Center	16	Ste Consultants, Llc	8	Healthcare Employment Network	6
Emergingmilestones Inc	15	Talemed Incorporated	7	Kpg Healthcare	6
Healthcare Employment Network	15	Berkeley Unified School District	6	Sutter Medical Center	6
Aya Healthcare	14	Emerging Milestones	6	UC San Francisco Medical Center	6
All Better Together	13	Jackson Physician Search	6	Aya Healthcare	5
Regional Medical Center San Jose	13	UC San Francisco Medical Center	6	Sutter Health Sacramento Sierra Region	5
Stanford Health Care	12	University California	6	Biotelemetry, Inc	4
Atlas Med	10	Biotelemetry, Inc	5	Lifewatch Services Incorporated	4
Sutter Health Sacramento Sierra Region	10	Brentwood Union School District Northern California	5	Springboard Healthcare	4
Kpg Healthcare	9	Cross Country Allied	5	UnitedHealth Group	4

Source: Burning Glass

Educational Supply

City College of San Francisco is the only community college in the Bay Region issuing awards on TOP 1213.00 - Cardiovascular Technician, issuing 7 annual awards (3-year average).

Table 7. Awards on TOP 1213.00 - Cardiovascular Technician in the Bay Region

College	Sub-Region	Headcount	Associates	Certificates	Total
San Francisco	Mid-Peninsula	55	1	6	7
Foothill	Silicon Valley	137			
Ohlone	East Bay	18			
Santa Rosa	North Bay	220			
Total Bay Region		430	1	6	7
Total Mid-Peninsula Sub-Region		55	1	6	7

Source: IPEDS, Data Mart and Launchboard

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 68 annual openings for Cardiovascular Technologists and Technicians and 7 annual (3-year average) awards for an annual undersupply of 61 students. Because CCSF is the only community college in the region issuing awards on this TOP code, the gap analysis for the Mid-Peninsula Sub-Region is not relevant. CCSF's program supply is the only supply in the region.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1213.00 - Cardiovascular Technician

2015-16	Bay (All CTE Programs)	City College of San Francisco (All CTE Programs)	State (1213.00)	Bay (1213.00)	Mid-Peninsula (1213.00)	City College of San Francisco (1213.00)
% Employed Four Quarters After Exit	74%	73%	70%	73%	71%	70%

Cardiovascular Technologists and Technicians in 12 County Bay Region and in Mid-Peninsula Sub-Region, 2019

Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$10,170	\$8,399	\$10,242	\$10,032	\$10,111
Median % Change in Earnings	46%	50%	48%	47%	47%	49%
% of Students Earning a Living Wage	63%	55%	53%	59%	52%	53%

Source: Launchboard Pipeline (version available on 3/26/19)

Skills, Certifications and Education

Table 9. Top Skills for Cardiovascular Technologists and Technicians in Bay Region (March 2018 - Feb 2019)

Skill	Postings	Skill	Postings	Skill	Postings
Cardiopulmonary Resuscitation (CPR)	310	Autism Diagnosis / Treatment / Care	65	Arrhythmia Diagnosis / Treatment	39
Catheterization Laboratory (CATH LAB)	227	Customer Service	65	Data Entry	38
Electrocardiogram (EKG / ECG)	199	Teaching	64	Surgery	38
Cardiology	155	Ultrasound	63	Electrocardiogram (EKG) Interpretation	36
Radiology	133	Clerical Duties	51	Treatment Planning	36
Advanced Cardiac Life Support (ACLS)	115	Quality Assurance and Control	48	Acute Care	34
Life Support	103	Holter Monitor	47	Calculation	34
Patient Care	100	Special Needs Children	47	Medical Terminology	33
Catheterization	84	X-Rays	47	Occupational Health and Safety	33
Psychology	84	Stress Testing	45	Medical Coding	32
Scheduling	83	Telemetry	44	Aseptic Technique	31
Applied Behavior Analysis	76	Anatomy	43	Interventional Radiology (IR)	31
Repair	76	Cleaning	43	Echocardiography	30
Child Development	67	Behavior Analysis	40	Measles Mumps Rubella (MMR)	29
Record Keeping	66	Patient Preparation	40	Angiography	28

Source: Burning Glass

Table 10. Certifications for Cardiovascular Technologists and Technicians in the Bay Region (March 2018 - Feb 2019)

Note: 35% 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.

Certification	Postings	Certification	Postings
Basic Life Saving (BLS)	151	Typing Certification	17
Driver's License	146	E.K.G. Certification	16
First Aid Cpr Aed	145	Registered Vascular Technologist	15
Advanced Cardiac Life Support (ACLS) Certification	114	Associate Business Continuity Professional	11
Basic Cardiac Life Support Certification	100	Registered Diagnostic Medical Sonographer	10
American Registry of Radiologic Technologists (ARRT) Certification	84	Registered Radiologic Technologist	10
Registered Cardiovascular Invasive Specialist	76	Respiratory Care Practitioner (RCP)	10
Registered Behavior Technician	68	Certified Clinical Perfusionist	8
Board Certified Behavior Analyst (BCBA)	55	Certified Surgical Technologist	8
Certified Cardiographic Technician	47	Registered Cardiac Sonographer	8
Registered Diagnostic Cardiac Sonographer	34	Board Certified/Board Eligible	7
American Registry For Diagnostic Medical Sonography (ARDMS)	31	Certified Cardiology Technician	6

American Heart Association Certification	26	Certified Compensation Professional (CCP)	6
Certified Rhythm Analysis Technician	26	Certified Radiology Technician	6
Emergency Medical Technician (EMT)	22	Registered Respiratory Therapist	6
Registered Cardiac Electrophysiology Specialist	20	Certified Cardiovascular Technologist	5
Ca License	19	Certified Teacher	5

Source: Burning Glass

Table 11. Education Requirements for Cardiovascular Technologists and Technicians in Bay Region

Note: 55% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

Education (minimum advertised)	Latest 12 Mos. Postings
High school or vocational training	282 (65%)
Associate Degree	39 (9%)
Bachelor's Degree or Higher	115 (26%)

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

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