

Program Endorsement Brief: 1213.00 – Cardiovascular Technician EKG Technician

Los Angeles/Orange County Center of Excellence, October 2021

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met <input type="checkbox"/>	Endorsed: Some Criteria Met <input checked="" type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> (See comments below)	
Living Wage: (Entry-Level, 25th)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>	

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to one middle-skill occupation: *cardiovascular technologists and technicians* (29-2031). Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree.¹ This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupation.

Based on the available data, there does not appear to be a supply gap for *cardiovascular technologists and technicians* in the region. While this program does not meet the traditional supply/demand endorsement criteria, there may be demand for these workers from local employers that is not reflected in traditional labor market data. For this reason, real-time labor market data is included in this report as well – to provide a more nuanced view of the regional job market for *cardiovascular technologists and technicians*. Furthermore, 337 out of the 402 annual average awards (84%) included in the supply/demand analysis were issued by proprietary training institutions. With community colleges only issuing 65 related awards, there may be an opportunity to attract a larger portion of prospective students to community colleges if program offerings are expanded. In addition to this occupation’s entry-level wage exceeding the self-sufficiency standard wage in both Los Angeles and Orange counties, workers typically need an associate degree. **Therefore, due to some of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

¹ The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor’s degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **97 jobs available annually** in the region due to new job growth and replacements, **which is less than the 402 awards conferred annually** by educational institutions in the region.
 - However, over the past 12 months there were **2,229 online job postings related to cardiovascular technologists and technicians**. The highest number of job postings were for monitor technician, echo technician, cardiovascular operation room (CVOR) certified surgical technician (CST)/surgical technician (ST), cardiovascular technician, and EKG technician.
- **Living Wage Criteria** – In Los Angeles County, the **typical entry-level hourly wage** for *cardiovascular technologists and technicians* is **\$24.83, which is above the self-sufficiency standard wage** (living wage) for one adult in the region (\$18.10 in Los Angeles County).²
- **Educational Criteria** – The Bureau of Labor Statistics (BLS) lists an **associate degree** as the **typical entry-level education for cardiovascular technologists and technicians**.
 - National-level educational attainment data indicates **42% of workers in the field have completed some college or an associate degree**.

Supply:

- Between 2017 and 2020, **three community colleges** in the LA/OC region issued awards in cardiovascular technician and electrocardiography programs, conferring an average of **65 awards**.
- Between 2016 and 2019, non-community college institutions in the region conferred an average of **337 awards** in relevant programs.
 - With non-community colleges issuing 84% of the awards included in the supply/demand analysis, there might be an opportunity to attract a larger portion of prospective students to the community colleges if existing programs are expanded or newly created.

² Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California on 10/11/2021. For more information, visit: <http://selfsufficiencystandard.org/california>.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for *cardiovascular technologists and technicians*. In Los Angeles/Orange County, the number of jobs for this occupation is projected to increase by 6% through 2025. There will be nearly 100 job openings per year through 2025 due to job growth and replacements.

This report includes employment projection data by Emsi which uses EDD information. Emsi's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the full impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the full impacts of COVID-19 into account.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Los Angeles	1,258	1,326	68	5%	76
Orange	345	366	21	6%	21
Total	1,603	1,692	89	6%	97

Wages

The labor market endorsement in this report considers the hourly wages for *cardiovascular technologists and technicians* in Los Angeles County, as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County — The typical entry-level hourly wage for *cardiovascular technologists and technicians* is \$24.83, which is **above** the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Experienced workers can expect to earn approximately \$49.09, which is also above the self-sufficiency standard wage.

Orange County — The typical entry-level hourly wage for *cardiovascular technologists and technicians* is \$23.32, which is **above** the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Experienced workers can expect to earn approximately \$46.21, which is also above the self-sufficiency standard wage.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Job Postings

Over the past 12 months, there have been 2,229 online job postings related to *cardiovascular technologists and technicians*. The highest number of job postings were for monitor technician, echo technician, cardiovascular operation room (CVOR) certified surgical technician (CST)/surgical technician (ST), cardiovascular technician, and EKG technician. The top skills were cardiopulmonary resuscitation (CPR), electrocardiogram (EKG/ECG), patient care, cardiology, and telemetry. The top employers, by number of job postings, in the region were Healthcare Traveler Allied Health, University of Southern California, University of California, Cedars-Sinai, and Kaiser Permanente.

It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the full impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists an associate degree as the typical entry-level education for *cardiovascular technologists and technicians*. National-level educational attainment data indicates 42% of workers in the field have completed some college or an associate degree. Of the 49% of job postings listing a minimum education requirement in Los Angeles/Orange County, 89% (978) requested a high school or vocational training, 3% (36) requested an associate degree, and 8% (89) requested a bachelor's degree.

Educational Supply

Community College Supply — Exhibit 2 shows the annual and three-year average number of awards conferred in the following two programs: Cardiovascular Technician (1213.00) and Electrocardiography (1215.00). In the region, the colleges that have issued awards have been Glendale, LA Pierce, and Orange Coast. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

Exhibit 2: Regional community college awards (certificates and degrees), 2017-2020

TOP Code	Program	College	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
1213.00	Cardiovascular Technician	Orange Coast	21	17	19	19
		OC Subtotal	21	17	19	19
		Supply Subtotal/Average	21	17	19	19
1215.00	Electrocardiography	Glendale	-	-	42	14
		LA Pierce	-	-	43	14
		LA Subtotal	-	-	85	28
		Orange Coast	19	17	16	17
		OC Subtotal	19	17	16	17
Supply Subtotal/Average			19	17	101	46
Supply Total/Average			40	34	120	65

Non-Community College Supply — For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that may provide training programs for *cardiovascular technologists and technicians*. Exhibit 3 shows the annual and three-year average number of awards conferred in Cardiovascular Technology/Technologist (51.0901) programs. Due to different data collection periods, the most recent three-year period of available data is from 2016 to 2019. Between 2016 and 2019, non-community college institutions in the region conferred an average of 337 awards.

Exhibit 3: Regional non-community college awards, 2016-2019

CIP Code	Program	Institution	2016-17 Awards	2017-18 Awards	2018-19 Awards	3-Year Average
51.0901	Cardiovascular Technology/Technologist	Associated Technical College-Los Angeles	174	215	171	187
		ATI College-Norwalk	8	-	2	3
		West Coast Ultrasound Institute	64	194	184	147
Supply Total/Average			246	409	357	337

Appendix A: Occupational demand and wage data by county

Exhibit 4. Los Angeles County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Cardiovascular Technologists and Technicians (29-2031)	1,258	1,326	68	5%	76	\$24.83	\$36.45	\$49.09

Exhibit 5. Orange County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Cardiovascular Technologists and Technicians (29-2031)	345	366	21	6%	21	\$23.32	\$34.29	\$46.21

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education
Cardiovascular Technologists and Technicians (29-2031)	1,603	1,692	89	6%	97	Associate degree

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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