

Phlebotomy

Inland Empire/Desert Region (Riverside and San Bernardino counties)

This workforce demand report uses state and federal job projection data developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.

Summary

- Community college phlebotomy programs provide the knowledge, skills, and abilities that lead to the phlebotomists, community college-level occupation.
- Phlebotomists are projected to have 167 annual job openings through 2024, increasing employment by 10%.
- The 50th percentile hourly earnings for phlebotomists is \$21.82 per hour, below the regional \$24.36 per hour self-sustainable earnings standard for a single adult with one child.
- Regional community colleges offering phlebotomy programs have issued 12 awards annually over the last three academic years. Other private educational institutions in the region have issued 38 awards annually over the previous three academic years.
- The Centers of Excellence recommends developing a phlebotomy program to meet the regional demand for phlebotomists.

Introduction

California Community College phlebotomy (TOP 1205.10) programs prepare students for employment as phlebotomists through training related to the principles and practices for puncturing the skin to give injections, and puncturing veins or arteries to obtain blood samples for analysis and diagnosis (Taxonomy of Programs, 2012). The knowledge, skills, and abilities trained by phlebotomy programs lead to the phlebotomist occupation.

Phlebotomists (SOC 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.

Sample job titles: Lab Liaison Technician, Mobile Examiner, Patient Service Technician (PST), Phlebotomist, Phlebotomy Technician, Registered Phlebotomist

Entry-Level Educational Requirement: Postsecondary nondegree award

Training Requirement: None

Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 60%

Job Counts and Projections

In 2019, there were 1,419 phlebotomist jobs in the Inland Empire/Desert Region. This occupation is projected to have 167 annual job openings to fill new or backfill jobs that workers are permanently vacating (includes occupational transfers and retirements). Phlebotomist employment is expected to increase by 10% through 2024. Exhibit 1 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers age 55 years and greater.

Exhibit 1: Five-year projections, 2019-2024

2019 Jobs	2024 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
1,419	1,561	10%	1,001	167	13%

Source: Emsi 2021.2

Exhibit 2 shows the number of job ads posted during the last 12 months and the regional and statewide average time fill. During the previous 12 months, 541 job advertisements for phlebotomists were posted in the Inland Empire/Desert Region. On average, regional employers fill online job advertisements for phlebotomists within 30 days. This is the same as the statewide time to fill, indicating that regional employers likely face similar challenges filling open positions as other employers in California.

Exhibit 2: Job ads and time to fill

Job Ads	Regional Average Time to Fill (Days)	Statewide Average Time to Fill (Days)
541	30	30

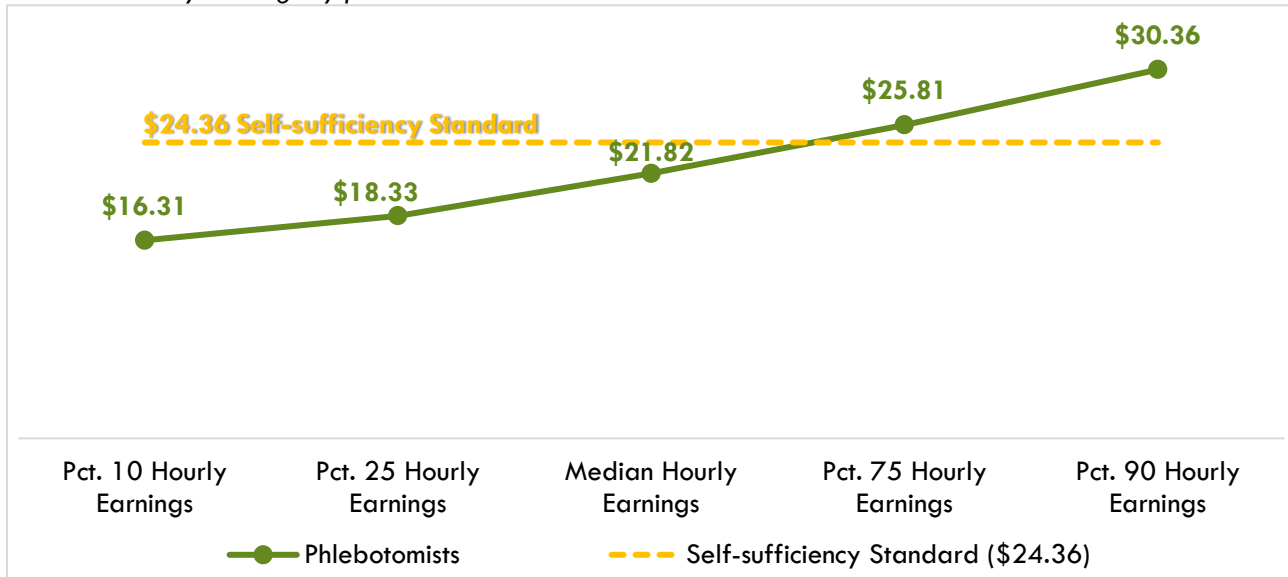
Source: Burning Glass – Labor Insights

Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide self-sustainable income. The University of Washington estimates that a self-sufficient hourly rate for a single adult with one school-age child is \$24.36 per hour or \$51,452 annually in Riverside County; \$23.73 per hour or \$50,119 annually in San Bernardino County (Pearce, 2021). For this study, the higher hourly earnings requirement in Riverside County is adopted as the self-sufficiency standard for the two-county region.

The hourly earnings for phlebotomists do not surpass the self-sustainability rate until the 75th percentile, indicating that only the top 25% of workers in the field earn self-sustainable earnings. Exhibit 3 displays the hourly earnings for phlebotomists.

Exhibit 3: Hourly earnings by percentile



Source: Emsi 2021.2

According to the California Labor Market Information Division's occupational guides, phlebotomist benefits may include health and life insurance, sick leave, vacation, and retirement plans (Detailed Occupational Guides, 2021).

Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for phlebotomists over the last 12 months. Online job ad salary information reveals that employers are willing to pay phlebotomists \$41,000 annually, below the \$51,452 annual (\$24.36 hourly) self-sufficiency standard for the region. Consider the salary information with caution since only 12% (64 out of 541) online job postings for these occupations provided salary information. The salary figures are prorated to reflect full-time, annual earnings status.

Exhibit 4: Advertised salary information

Number of job postings	Real-Time Salary Information				Average Annual Salary
	Less than \$35,000	\$35,000 to \$49,999	\$50,000 to \$74,999	More than \$75,000	
64	44%	42%	6%	8%	\$41,000

Source: Burning Glass – Labor Insights

Job Titles, Employers, Skills, Education, and Work Experience

Exhibit 5 displays the job titles most frequently included in phlebotomist job advertisements posted over the last 12 months. Displaying job titles may provide some insight into the positions employers are looking to fill.

Exhibit 5: Job titles most frequently in employer job ads for phlebotomists

Job Titles	Job Ads
Phlebotomist	200
Phlebotomist I	86
Mobile Phlebotomist	50
Phlebotomy Technician	39
Phlebotomist Per Diem	25
Phlebotomist II	19
<i>All other job titles</i>	<i>122</i>
Total	541

Source: Burning Glass – Labor Insights

Exhibit 6 displays the employers posting the most job ads during the last 12 months. Displaying employer names provides some insight into where students may find employment after completing a program. Quest Diagnostics posted the most advertisements in the region, accounting for 24% of phlebotomist job advertisements.

Exhibit 6: Employers posting the most job ads for phlebotomists

Top Employers	Job Ads
Quest Diagnostics Incorporated	130
Laboratory Corporation of America	82
Kindred Healthcare Incorporated	27
American Biometric Health	26
TridentCare	12
CSL Plasma	12
Kaiser Permanente	9
Foundation Laboratory	9
STG International Incorporated	8
Loma Linda University Health	8
Grifols	8
<i>All other employers</i>	<i>210</i>
Total	541

Source: Burning Glass – Labor Insights

Exhibit 7 lists a sample of employers' specialized and employability skills when looking for workers to fill phlebotomist positions. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job postings may be utilized to guide curriculum development.

Exhibit 7: Sample of in-demand skills from employer job ads

Specialized skills	Employability skills
<ul style="list-style-type: none"> • Venipuncture • Specimen Collection • Data Entry • Customer Billing • Blood Samples • Customer Service 	<ul style="list-style-type: none"> • Communication Skills • Research • Telephone Skills • Typing • English • Organizational Skills

Source: Burning Glass – Labor Insights

According to the Bureau of Labor Statistics, approximately 60% of incumbent workers in this field hold a community college-level of educational attainment; "some college, no degree" and an "associate degree." Online job advertisements indicate that the majority (98%) of employers seeking phlebotomists sought candidates with a high school diploma or vocational training. Exhibit 8 displays the typical entry-level education, educational attainment, and minimum advertised education requirements for phlebotomists.

Exhibit 8: Typical entry-level education, educational attainment, and minimum advertised education requirements

Typical Entry-Level Education Requirement	CC-Level Educational Attainment*	Number of Job Ads	Real-Time Minimum Advertised Education Requirement		
			High school or vocational training	Associate degree	Bachelor's degree or higher
Postsecondary nondegree award	60%	370	98%	2%	-

Source: Emsi 2021.2, Burning Glass – Labor Insights

*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Exhibit 9 displays the work experience typically required before employment and the real-time work experience requirements from employer job ads for phlebotomists. Job advertisements indicate that the majority of employers sought candidates with zero to two years of work experience.

Exhibit 9: Work experience required and real-time work experience requirements

Work Experience Typically Required	Real-Time Work Experience			
	Number of job postings	0 – 2 years	3 – 5 years	6+ years
None	288	90%	10%	-

Source: Emsi 2021.2, Burning Glass – Labor Insights

Certifications

The Laboratory Field Services division of the California Department of Public Health (CDPH) is responsible for licensing phlebotomists in California. The three levels of phlebotomy certifications include Limited Phlebotomy Technician (LPT), Certified Phlebotomy Technician I (CPT I), and Certified Phlebotomy Technician II (CPT II), representing different scopes of practice. The LPT certification authorizes skin puncture for blood collection only; the CPT I certification authorizes skin puncture and venipuncture blood collection; and the CPT II authorizes skin puncture, venipuncture, and arterial puncture blood collection (CDPH, 2020). Each certification requires a high school diploma or equivalent and training from a CDPH approved training program. For more information, please visit the CDPH website (CDPH, 2020).

Approximately 70% of the advertisements for phlebotomists included certification information. Employers specified a desire for CPT I certification in 179 advertisements and CPT II certification in 30 advertisements. Regional employers did not specify a desire for phlebotomists with LPT certification. Exhibit 10 displays the certifications required by employers posting job ads for phlebotomists in the Inland Empire/Desert Region.

Exhibit 10: Certifications typically required in advertisements for phlebotomists

Certifications	Job Ads (n=378)
Phlebotomy Certification	305
Driver's License	171
Certified Medical Assistant	47
Basic Life Support (BLS)	18

Source: Burning Glass – Labor Insights

Student Completions for Programs

Exhibit 11 displays completion data for two local community college phlebotomy (TOP 1205.10) programs between 2017 and 2020. Over the last three academic years, Palo Verde College issued 12 awards

annually in its phlebotomy program. According to the Laboratory Field Services division of the CDPH, there are three approved phlebotomy training schools offered at regional community colleges, including Chaffey College, Palo Verde College, and Victor Valley College (CDPH, 2021). Chaffey and Victor Valley Colleges do not have phlebotomy programs. The student completion and outcome methodology are available on page 10.

Exhibit 11: 2017-20, Annual average community college awards for phlebotomy programs in the Inland Empire/Desert Region

TOP 1205.10 - Phlebotomy (Local Program Title)	Certificate requiring < 6-semester units	Total CC Annual Average Awards, Academic Years 2017-20
Palo Verde* (Phlebotomy)	12	12
San Bernardino Valley (Phlebotomy)	-	0
Total	12	12

Source: MIS Data Mart

*School accredited by the CDPH

California program outcome data may provide a useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12. The outcome methodology is available in the appendix section of this report.

Exhibit 12: 1205.10 – Phlebotomy strong workforce program outcomes

Strong Workforce Program Metrics: 1205.10 - Phlebotomy Academic Year 2017-18, unless noted otherwise	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2018-19)	38	543
Completed 9+ career education units in one year (2018-19)	-	23%
Perkins Economically disadvantaged students (2018-19)	74%	84%
Students who earned a degree, certificate, or attained apprenticeship (2018-19)	-	29
Transferred to a four-year institution (transfers)	-	20
Job closely related to the field of study (2016-17)	-	81%
Median annual earnings (all exiters)	\$22,344	\$31,064
Median change in earnings (all exiters)	-	48%
Attained a living wage (completers and skills-builders)	-	47%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Phlebotomy Technician/Phlebotomist (CIP 51.1009) awards reported by other postsecondary education providers are displayed in Exhibit 13. Completion data is compiled from the Integrated Postsecondary Education Data System (IPEDS) for the most recent three years available. On average, other postsecondary education institutions issued 38 awards annually. Only 29 awards were issued from an accredited training program. Due to IPEDS reporting limitations, it is assumed that each award represents a qualified worker since it is unknown if students are earning multiple awards from this program.

Exhibit 13: Other educational providers phlebotomy technician/phlebotomist programs, three-year annual average credentials in the Inland Empire/Desert Region

51.1009 – Phlebotomy Technician/Phlebotomist	Award <1 Academic Year	Other Educational Providers Annual Average Credentials, Academic Years 2016-19
California Nurses Educational Institute	9	9
Riverside County Office of Education – School of Career Education*	29	29
Total	38	38

Source: IPEDS

*School accredited by the CDPH

Recommendation for Phlebotomy Programs

Phlebotomists are expected to have 167 annual job openings and increase employment by 10% over the next five years. The hourly earnings for this occupation do not surpass the \$24.36 per hour self-sustainable earnings standard until the 75th percentile. This indicates that students may need a few years of on-the-job work experience to obtain the self-sustainable earnings standard.

Community college phlebotomy (1205.10) programs have issued 12 awards annually over the last three academic years. On average, other postsecondary educational institutions in the region have issued 38 awards annually. Of the 38 other educational institution awards, only 29 awards were issued from the accredited training program offered at the Riverside County Office of Education – School of Career Education. The median annual earnings for phlebotomy program completers in the region is \$22,344.

The Centers of Excellence recommends developing a phlebotomy program to meet the need for more qualified workers in the region. Colleges considering this program should partner with applicable employers to document the skills and certifications needed for their phlebotomy students to earn self-sustainable earnings after exiting the program.

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Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2017 and 2020, from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variation that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from records provided by California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2021 a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS), administered by Santa Rosa Junior College (LaunchBoard, 2021 a).

Job advertisement data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Additionally, preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job advertisements often do not reveal employers' hiring intentions; it is unknown if employers plan to hire one or multiple workers from a single online job ad or collect resumes for future hiring needs. A closed job ad may not be the result of a hired worker.

Table 1. 2019 to 2024 job growth, wages, entry-level education, training, and work experience required for phlebotomists

Occupation (SOC)	2019 Jobs	5-Year Change (New Jobs)	5-Year % Change (New Jobs)	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10 th to 90 th percentile)	Median Hourly Wage (50 th percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Phlebotomists (31-9097)	1,419	142	10%	167	\$16.31 to \$30.36	\$21.82	\$46,400	Postsecondary nondegree award & None	None

Source: Emsi 2021.2