



Clinical Laboratory Technologists and Technicians & Hemodialysis Technicians

Inland Empire/ Desert Region (Riverside-San Bernardino-Ontario Metropolitan Statistical Area)

Summary

- Employment for clinical laboratory technologists and technicians is expected to **increase by 13%** through 2022 in the Inland Empire/Desert Region. **A total of 741 job openings** will be available over the next five years.
- The **entry-level wage** for clinical laboratory technologists and technicians is **above the MIT Living Wage estimate of \$12.30 per hour** for a single adult living in the Inland Empire/Desert Region.
- Based on the lack of medical laboratory technology programs offered in the region, and the annual openings for clinical laboratory technologists and technicians in the local region (**148 annual job openings**), there appears to be an opportunity for program growth.

Introduction

Hemodialysis technicians is a job title associated with the clinical laboratory technologist and technicians occupation. The community colleges train the clinical laboratory technologist and technicians occupation in the medical laboratory technology program (TOP 1205.00). This program provides knowledge of how to apply chemical, physical science, engineering, and technological concepts, principles, and practices to human and other living systems. The occupational description for clinical laboratory technologists and technicians is listed below:

Clinical Laboratory Technologists and Technicians (29-2010) -Perform routine or complex medical laboratory tests for diagnosis, treatment, and prevention of disease.

Sample job titles: *Clinical Laboratory Technologist; Histologist Technologist; Medical Technologist (MT); Clinical Laboratory Scientist; Medical Laboratory Technician (MLT); Hemodialysis Technician*

Entry-Level Educational Requirement: *Associate degree*

Training Requirement: *None*

Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: *39%*

Job Opportunities

In 2017, there were 1,664 clinical laboratory technologist and technicians jobs in the Inland Empire/Desert Region. Across the region, employment for clinical laboratory technologists and technicians is expected to increase by 13% through 2022. Employers in the region will need to hire 741 workers over the next five years to fill new jobs and to backfill jobs that workers are leaving (includes retirements).

Exhibit 1: Job counts, five-year projections, and age share demographics for clinical laboratory technologists and technicians

Region	2017 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Inland Empire/Desert Region	1,664	13%	741	148	22%

Source: EMSI 2018.4

Earnings

The entry-level wage for clinical laboratory technologists and technicians is above the MIT Living Wage estimate of \$12.30 per hour for a single adult living in the Inland Empire/Desert Region. Detailed information about the MIT Living Wage Calculator, including additional wage requirements for adults with dependent children, is available on their website:

<http://livingwage.mit.edu/metros/40140>.

Exhibit 2: Earnings for clinical laboratory technologists and technicians

Occupation	Entry to Experienced Hourly Earnings Range*	Median Wage*	Avg. Annual Earnings
Clinical Laboratory Technologists and Technicians	\$23.62 to \$50.43	\$37.03	\$85,500

Source: EMSI 2018.4

*Entry Hourly is 25th percentile wage, the median is 50th percentile wage, experienced is 75th percentile wage.

Job Posting Data (Real-Time Labor Market Information)

Exhibit 3 displays the number of job ads posted for clinical laboratory technologists and technicians during the last 12 months along with the Inland Empire/Desert Region and national average time it takes to fill jobs. On average, it takes four days longer for employers to find qualified candidates to fill open positions than the national average, indicating that open positions are slightly more challenging to fill locally. Please see page 7 for employer demand for hemodialysis technicians skills.

Exhibit 3: Job ads and time to fill for clinical laboratory technologists and technicians, December 2017 – November 2018

Occupation	Job Ads	Region Average Time to Fill (Days)	National Average Time to Fill (Days)
Clinical Laboratory Technologists and Technicians	705	40	37

Source: Burning Glass – Labor Insights

Employers

Exhibit 4 displays a sample of the employers that have been posting job ads for clinical laboratory technologists and technicians over the last 12 months.

Exhibit 4: Employers posting the most job ads for clinical laboratory technologists and technicians, December 2017 – November 2018

Occupation	Top Employers
Clinical Laboratory Technologists and Technicians (<i>n</i> =502)	<ul style="list-style-type: none"> • Loma Linda University Health • Tenet Healthcare • Hospital Corporation of America

Source: Burning Glass – Labor Insights

In-Demand Skills

Exhibit 5 lists the in-demand skills that employers are seeking when looking for workers to fill clinical and laboratory technologist and technician positions. The skills reported in job postings may be utilized as a helpful guide for curriculum development. Specialized skills are occupation-specific skills employers are requesting for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is commonly referred to as “soft skills.”

Exhibit 5: Skills in demand for clinical laboratory technologists and technicians, December 2017 – November 2018

Occupation	Specialized skills	Employability skills
Clinical Laboratory Technologists and Technicians (n=564)	<ul style="list-style-type: none"> Quality Assurance and Control Chemistry Phlebotomy 	<ul style="list-style-type: none"> Communication Skills Detail-Oriented Teamwork/Collaboration

Source: Burning Glass – Labor Insights

Certifications

Exhibit 6 displays the certifications most frequently requested or required by employers in job postings over the last 12 months.

Exhibit 6: Certifications in demand for clinical laboratory technologists and technicians, December 2017– November 2018

Occupation	Top Certifications Requested in Job Postings
Clinical Laboratory Technologists and Technicians (n=327)	<ul style="list-style-type: none"> Phlebotomy Certification American Society for Clinical Pathology (ASCP) Basic Life Saving/Support (BLS)

Source: Burning Glass – Labor Insights

Educational Requirements

Exhibit 7 displays the entry-level education typically required to become a clinical and laboratory technologist and technician according to the Bureau of Labor Statistics, educational attainment for incumbent workers with “some college, no degree” and an “associate degree” according to the Current Population Survey, and the minimum advertised education requirement requested by employers in online job ads.

Exhibit 7: Educational attainment and online job ads with minimum advertised education requirements for clinical laboratory technologists and technicians, December 2017 – November 2018

Occupation	Work Experience Required	Typical Entry-Level Education Requirement	Two-Year Postsecondary Level of Educational Attainment*	Minimum Advertised Education Requirement from Job Ads			
				Number of Job Postings (n=)	High school diploma or vocational training	Associate degree	Bachelor’s degree or higher
Clinical Laboratory Technologists and Technicians	None	Associate degree	39%	413	60%	9%	31%

Source: EMSI 2018.4, Current Population Survey, Burning Glass – Labor Insights

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

Student Completions

Exhibit 8 shows the annual average statewide community college credentials (associate degrees and certificates) conferred during the three academic years between 2014 and 2017, with the relevant TOP code as well as the program titles used at each college, sourced from the Chancellor’s Office Curriculum Inventory (COCI). Statewide data is displayed in exhibit 8 because there are no medical laboratory technology programs offered in the Inland Empire/Desert Region. Please note, a credential is not equivalent to a single person in search of a job opening since a student may earn more than one award, such as an associate degree in addition to a certificate. Community College student outcome information is from the CTE LaunchBoard based on the selected TOP code(s) and region.

Exhibit 8: California annual average community college student completions for medical laboratory technology programs

1205.00 – Medical Laboratory Technology	Community College Annual Average Credentials (2014-17)
Canyons – Medical Laboratory Technician	
Associate Degree	10
Certificate 6 to < 18 semester units	5
De Anza – Medical Laboratory Technology/Clinical Laboratory Assistant	
Associate Degree	1
Certificate 30 to < 60 semester units	2
Certificate 12 to < 18 semester units	2
Diablo Valley – Medical Laboratory Technology	
Associate Degree	1
Folsom Lake – Medical Laboratory Technician	
Associate Degree	6
Merritt - Histotechnician	
Certificate 30 to < 60 semester units	*1
Mt. San Antonio – Histologic Technician Training	
Associate Degree	20
Saddleback – Medical Laboratory Technician	
Associate Degree	7
Certificate 30 to < 60 semester units	12
San Diego Miramar – Medical Laboratory Technology	
Associate Degree	11
Certificate 18 to < 30 semester units	17
Certificate 6 to < 18 semester units	1
Southwestern – Medical Laboratory Technician	
Associate Degree	13
Total annual average community college credentials (2014-17)	109

Source: LaunchBoard, IPEDS, COCI

*Merritt issued one 30 to <60 semester unit certificates in 2016-17



1205.00 – Medical Laboratory Technology program Strong Workforce outcomes in California in the academic year 2015-16 [unless noted otherwise]:

- Number of course enrollments: 1,854 [2016-17]
- Completed 12+ CTE units in one year: 301 [2016-17]
- Number of students who transferred: 40
- Employed in the second fiscal quarter after exit: 85%
- Employed in the fourth fiscal quarter after exit: 85%
- Median earnings in the second fiscal quarter after exit: \$11,437
- Median annual earnings: \$46,140
- The percentage in a job closely related to the field of study: 85% [2014-15]
- Median change in earnings: 91%
- The proportion of students who attained a living wage: 86%

Job Posting Data for Hemodialysis Technicians

This section details job-posting data from employers seeking hemodialysis technicians. Over the past 12 months (December 2017 – November 2018), 444 job ads specified a need for individuals with hemodialysis skills in the Inland Empire/Desert Region. Despite hemodialysis technician being a clinical and laboratory technologist and technician job title, the majority of job postings are seeking registered nurses with hemodialysis skills. Exhibit 8 displays the top occupations requiring hemodialysis skills in the Inland Empire/Desert Region.

Exhibit 8: Job ads for occupations that require hemodialysis skills, December 2017 – November 2018

Occupation	Job Ads
Registered Nurses	243
Nursing Assistants	99
Licensed Practical and Licensed Vocational Nurses	18
Medical and Health Services Managers	18
Clinical and Laboratory Technologists and Technicians	15

Source: Burning Glass – Labor Insights

Exhibit 9 displays a sample of the employers that have been posting job ads for hemodialysis skills over the last 12 months.

Exhibit 9: Employers posting the most job ads for hemodialysis skills, December 2017 – November 2018

Top Employers		
• DaVita	• Loma Linda University Health	• Fresenius

Source: Burning Glass – Labor Insights

Exhibit 10 lists the in-demand skills that employers are seeking when looking for workers to fill positions that also require hemodialysis skills.

Exhibit 10: Skills in demand for occupations that require hemodialysis skills, December 2017 – November 2018

Specialized skills	Employability skills
<ul style="list-style-type: none"> • Patient Care • Cardiopulmonary Resuscitation (CPR) • Nephrology 	<ul style="list-style-type: none"> • Computer Literacy • Troubleshooting • Building Effective Relationships

Source: Burning Glass – Labor Insights

Exhibit 11 displays the certifications most frequently requested or required by employers in job postings over the last 12 months.

Exhibit 11: Certifications in demand for occupations that require hemodialysis skills, December 2017– November 2018

Top Certifications Requested in Job Postings	
<ul style="list-style-type: none"> Registered Nurse (RN) First Aid CPR AED Phlebotomy Certification 	<ul style="list-style-type: none"> Certified Nephrology Nurse Certified Dialysis Nurse Certified Hemodialysis Technician

Source: Burning Glass – Labor Insights

Exhibit 12 displays the minimum advertised education requirement requested by employers in online job ads.

Exhibit 8: Educational attainment and online job ads with minimum advertised education requirements for occupations that require hemodialysis skills, December 2017 – November 2018

Minimum Advertised Education Requirement from Job Ads			
Number of Job Postings (n=)	High school diploma or vocational training	Associate degree	Bachelor’s degree or higher
385	35%	60%	5%

Source: Burning Glass – Labor Insights

Sources

- Chancellor’s Office Curriculum Inventory (COCI)
- Current Population Survey
- Economic Modeling Specialists International (EMSI)
- Integrated Postsecondary Education Data System (IPEDS)
- Labor Insight/Jobs (Burning Glass)
- MIT Living Wage Calculator
- O*Net Online
- The Taxonomy of Programs, 6th Edition

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