










Clinical Lab Technicians

Labor Market Analysis: Imperial County

May 2021

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED EDUCATION FOR MAJORITY OF OCCUPATIONS ANALYZED
 <p>Proceed with New Program</p>	 	 	<input type="checkbox"/> Bachelor's Degree <input type="checkbox"/> Associate Degree <input type="checkbox"/> Some College or Certificate
<p>SUPPORT FOR PROGRAM MODIFICATION?</p>  	<p>NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING</p> <p>LOW</p> 	<p>NUMBER OF ANNUAL JOB OPENINGS</p> <p>MEDIUM</p> 	<input checked="" type="checkbox"/> HS Diploma or Equivalent <input type="checkbox"/> Less than a HS Diploma <input type="checkbox"/> Apprenticeship

This brief provides labor market information about *Clinical Lab Technicians* to assist the San Diego and Imperial Counties Community Colleges with program development and strategic planning. *Clinical Lab Technicians* include “Clinical Laboratory Technologists and Technicians” and “Phlebotomists.” According to available labor market information, *Clinical Lab Technicians* in Imperial County have a labor market demand of 10 annual job openings (while average demand for a single occupation in Imperial County is 14 annual job openings), and no colleges in Imperial County supply awards for these occupations, suggesting that there is a supply gap in the labor market. Entry-level wages and median wages for these occupations are above the living wage. This brief recommends proceeding with developing a new program or a program modification because 1) a supply gap exists for these occupations in the region and 2) entry-level and median earnings are above the living wage. The community colleges should note that employers typically posted a minimum educational requirement of a high school diploma or equivalent for these occupations; however, nationally, people employed as “Clinical Laboratory Technologies and Technicians” typically have a bachelor’s degree and people employed as “Phlebotomists” typically have a postsecondary non-degree award.

Introduction

This report provides labor market information in Imperial County for the following occupational codes in the Standard Occupational Classification (SOC)¹ system:

- **Clinical Laboratory Technologists and Technicians** (SOC² 29-2010): Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.
- **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.

For the purpose of this report, these occupations are referred to as *Clinical Lab Technicians*.

¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc).

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Projected Occupational Demand

Between 2020 and 2025, *Clinical Lab Technicians* are projected to increase by 20 net jobs or 26 percent (Exhibit 1a). Employers in Imperial County will need to hire 10 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

Exhibit 1a: Number of Jobs for Clinical Lab Technicians (2010-2025)³

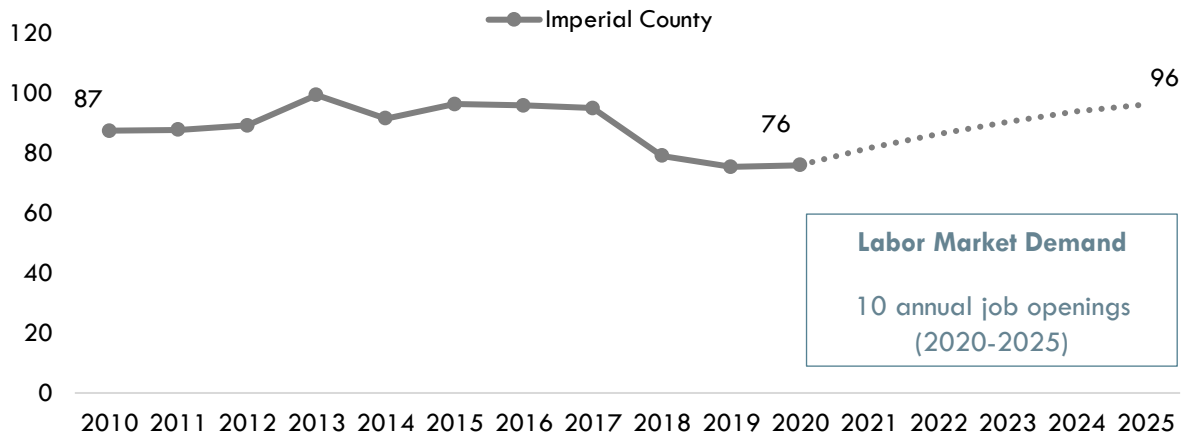


Exhibit 1b breaks down the projected number of jobs change by occupation. “Phlebotomists” are projected to have the most labor market demand between 2020 and 2025, with six annual job openings (Exhibit 1b).

Exhibit 1b: Number of Jobs for Clinical Lab Technicians in Imperial County (2020-2025)⁴

Occupational Title	2020 Jobs	2025 Jobs	2020 - 2025 Net Jobs Change	2020-2025 % Net Jobs Change	Annual Job Openings (Demand)
Phlebotomists	35	47	12	34%	6
Clinical Laboratory Technologists and Technicians	41	49	8	20%	4
Total	76	96	20	26%	10

³ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

⁴ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

Earnings

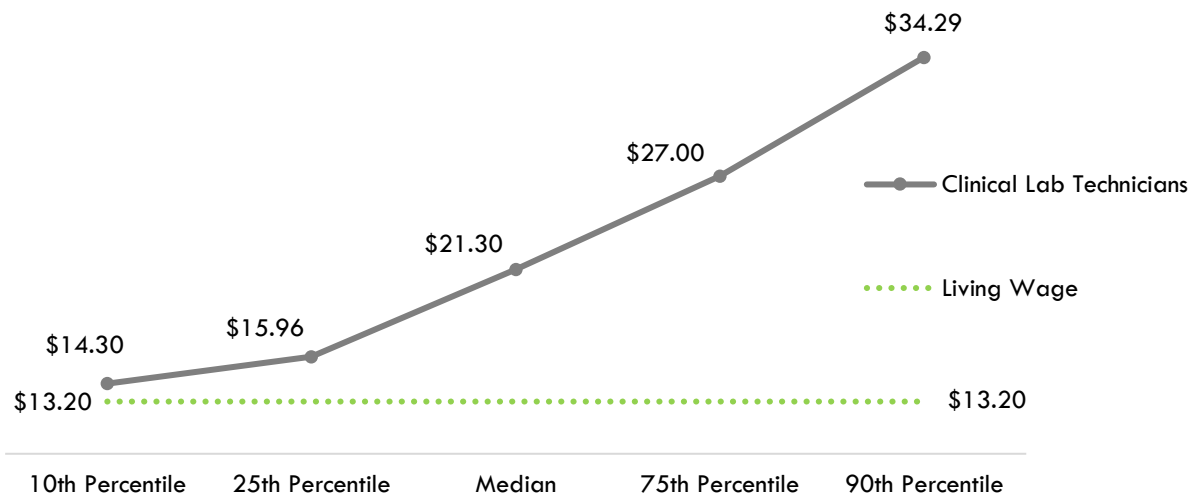
The entry-level hourly earnings for *Clinical Lab Technicians* range from \$13.80 to \$18.12 (Exhibit 2a).

Exhibit 2a: Hourly Earnings for Clinical Lab Technicians in Imperial County⁵

Occupational Title	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Phlebotomists	\$18.12	\$20.82	\$23.88
Clinical Laboratory Technologists and Technicians	\$13.80	\$21.78	\$30.13

On average, the entry-level hourly earnings for *Clinical Lab Technicians* are \$15.96; this is more than the living wage for a household of two adults and two school-age children in Imperial County, which is \$13.20 per hour (Exhibit 2b).⁶

Exhibit 2b: Average Hourly Earnings⁷ for Clinical Lab Technicians in Imperial County⁸



⁵ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

⁶ "California Family Needs Calculator (formerly the Self-Sufficiency Standard)," Insight: Center for Community Economic Development, last updated 2018. insightccd.org/2018-self-sufficiency-standard.

⁷ 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.

⁸ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.⁹ There are five TOP codes and nine CIP codes related to *Clinical Lab Technicians* (Exhibit 3).

Exhibit 3: Related TOP and CIP Codes for *Clinical Lab Technicians*

TOP or CIP Code	TOP or CIP Program Title
TOP 0430.00	Biotechnology and Biomedical Technology
TOP 0934.70	Electron Microscopy
TOP 0955.00	Laboratory Science Technology
TOP 1205.00	Medical Laboratory Technology
TOP 1205.10	Phlebotomy
CIP 15.0401	Biomedical Technology/Technician
CIP 15.0404	Instrumentation Technology/Technician
CIP 15.0499	Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other
CIP 26.1104	Computational Biology
CIP 41.0101	Biology Technician/Biotechnology Laboratory Technician
CIP 41.0301	Chemical Technology/Technician
CIP 51.1004	Clinical/Medical Laboratory Technician
CIP 51.1005	Clinical Laboratory Science/Medical Technology/Technologist
CIP 51.1009	Phlebotomy Technician/Phlebotomist

⁹ TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).

According to TOP data, no community colleges supply the region with awards for these occupations. According to CIP data, no non-community-college institution supplies the region with awards (Exhibit 4).

**Exhibit 4: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions
(Program Year 2014-15 through PY2018-19 Average)**

TOP or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards (PY16-17 to PY18-19)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY18-19)
0430.00	Biotechnology and Biomedical Technology	0	0	0
0934.70	Electron Microscopy	0	0	0
0955.00	Laboratory Science Technology	0	0	0
1205.00	Medical Laboratory Technology	0	0	0
1205.10	Phlebotomy	0	0	0
			Total	0

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply¹⁰ suggests that there is a **supply gap** for these occupations in Imperial County, with **10** annual openings and **no** awards. Comparatively, there are **3,858** annual openings in California and **1,349** awards, suggesting that there is also a supply gap across the state¹¹ (Exhibit 5).

Exhibit 5: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
Imperial	10	0	10
California	3,858	1,349	2,509

Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

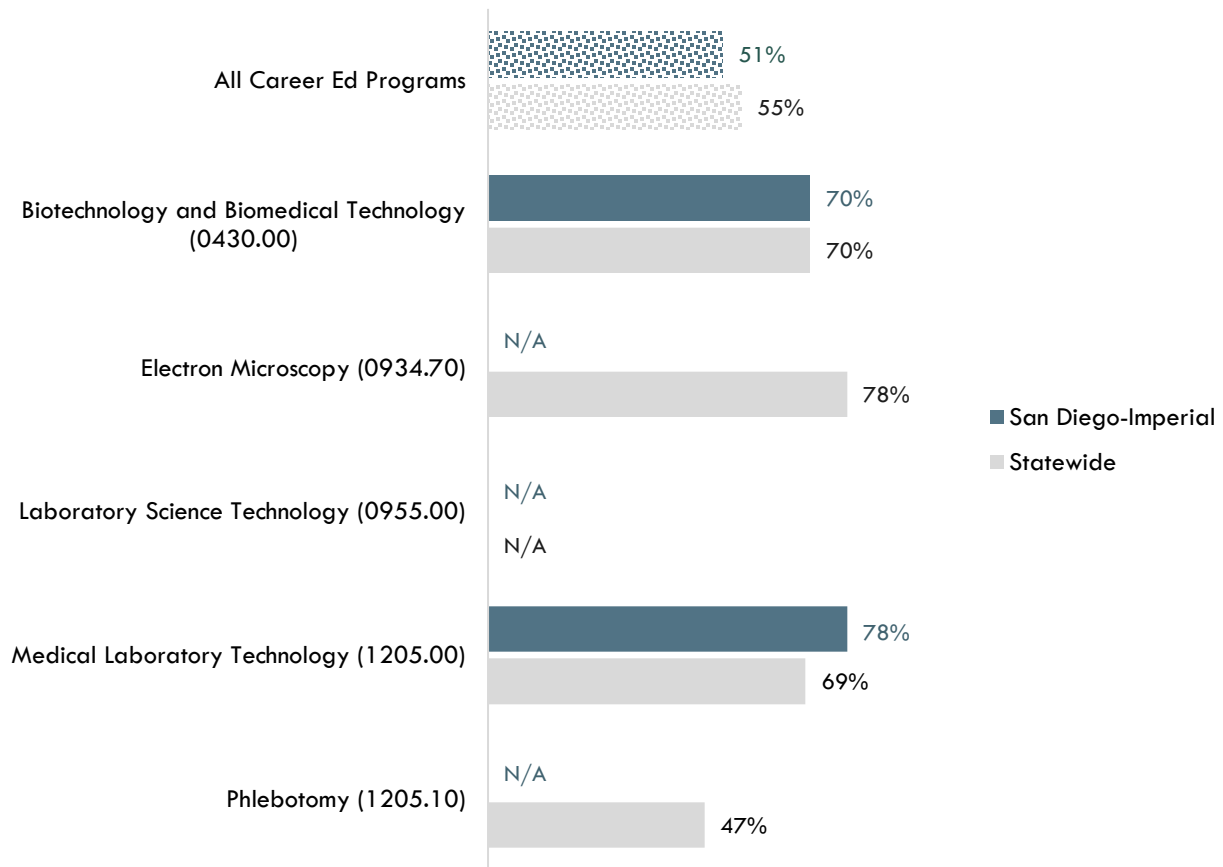
¹⁰ Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

¹¹ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/Supply-and-Demand.aspx.

Student Outcomes and Regional Comparisons

According to the California Community Colleges LaunchBoard, 70 to 78 percent of students in the San Diego-Imperial region earned a living wage after completing a program related to *Clinical Lab Technicians*, compared to 47 to 78 percent statewide and 55 percent of students in Career Education programs in general across the state (Exhibit 6a).¹²

Exhibit 6a: Percentage of Students Who Earned a Living Wage by Program, PY2017-18¹³



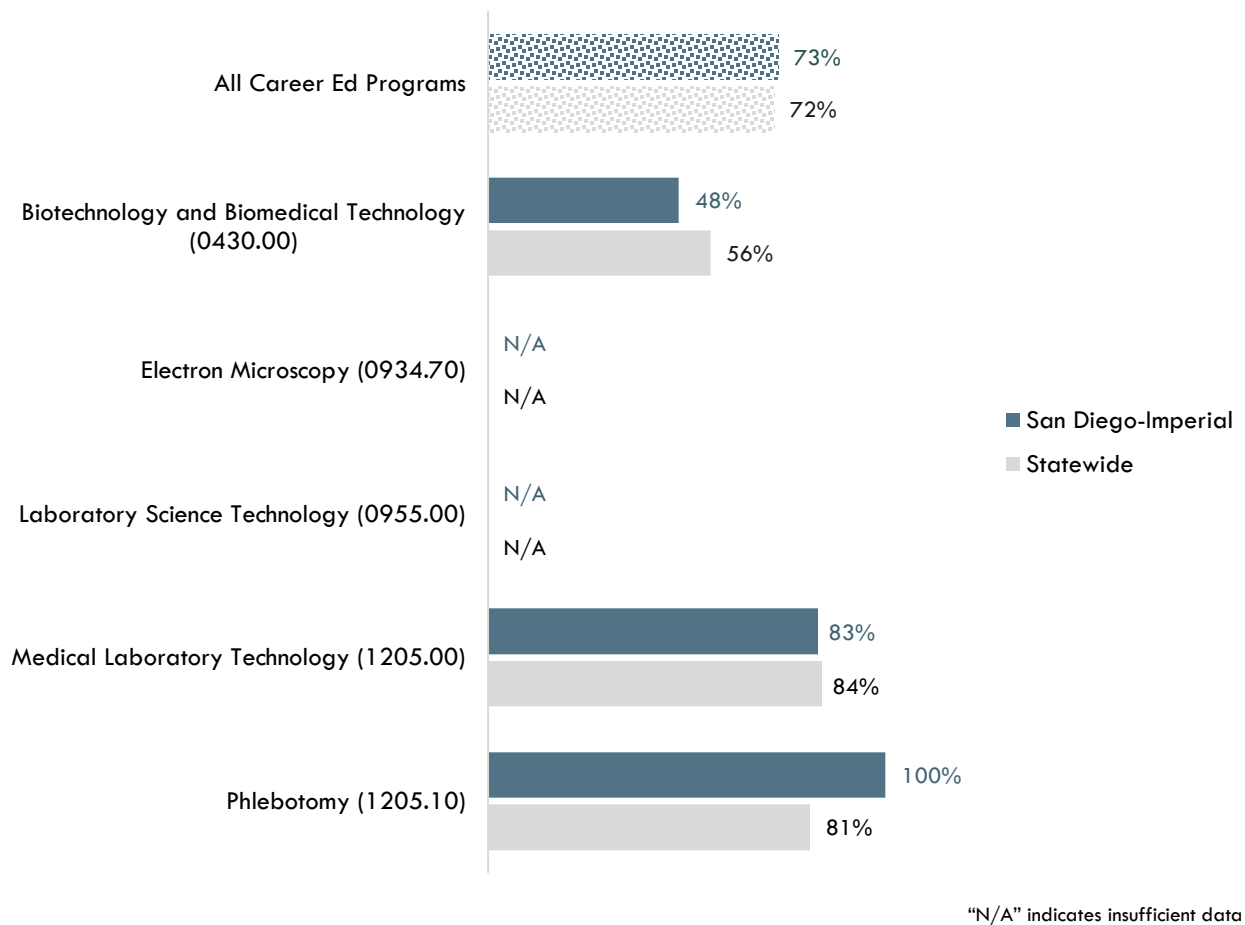
"N/A" indicates insufficient data

¹² "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹³ Among completers and skills builders who exited, the proportion of students who attained a living wage.

According to the California Community Colleges LaunchBoard, 48 to 100 percent of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a program related to *Clinical Lab Technicians*, compared to 56 to 84 percent statewide and 72 percent of students in Career Education programs in general across the state (Exhibit 6b).¹⁴

Exhibit 6b: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2016-17¹⁵



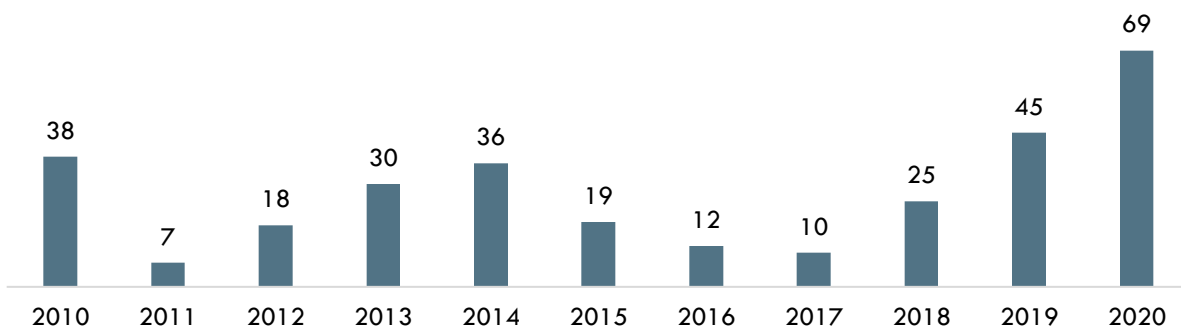
¹⁴ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹⁵ Most recent year with available data is Program Year 2016-17. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

Online Job Postings

This report analyzes not only historical and projected (traditional LMI) data, but also recent data from online job postings (real-time LMI). Online job postings may provide additional insight about recent changes in the labor market that are not captured by historical data. Between 2010 and 2020, there was an average of 28 online job postings per year for *Clinical Lab Technicians*¹⁶ in Imperial County (Exhibit 7). Please note that online job postings do **not** equal labor market demand; demand is represented by annual job openings (see Exhibit 1b). Employers may post a position multiple times for various reasons, such as increasing the pool of applicants, for example.

Exhibit 7: Number of Online Job Postings for *Clinical Lab Technicians* in Imperial County (2010-2020)¹⁷



Top Employers

Between January 1, 2018 and December 31, 2020, the top five employers in Imperial County for *Clinical Lab Technicians* were El Centro Regional Medical Center, Grifols, Quest Diagnostics, Pioneers Memorial Healthcare District, and LabCorp based on online job postings (Exhibit 8).

Exhibit 8: Top Employers in Imperial County for *Clinical Lab Technicians*¹⁸

Top Employers	
<ul style="list-style-type: none">• El Centro Regional Medical Center• Grifols• Quest Diagnostics, Inc.• Pioneers Memorial Healthcare District• LabCorp	<ul style="list-style-type: none">• Indian Health Service• Holtville Unified School District• State of California• RN Travel Healthcare• MidAmerican Energy

¹⁶ To capture online job posting data for Clinical Laboratory Technologists and Technicians (SOC 29-2010), SOC codes Medical and Clinical Laboratories Technologists (29-2011) and Medical and Clinical Laboratories Technicians (29-2012) were used. As of 2020, these occupations were merged into Clinical Laboratory Technologists and Technicians (SOC 29-2010), bls.gov/oes/current/oes292010.htm

¹⁷ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2020.

¹⁸ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

Education, Skills, and Certifications

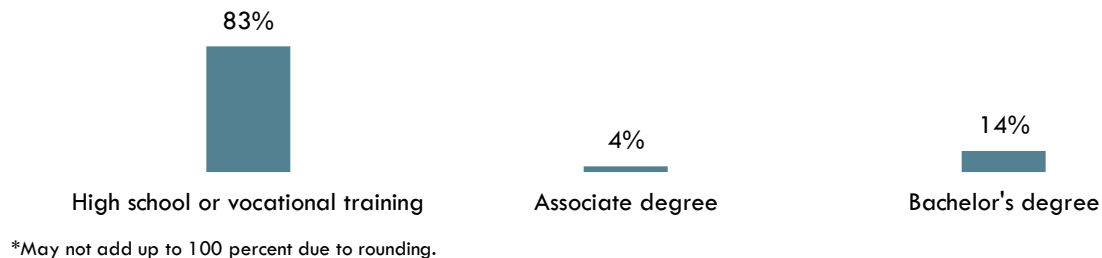
The typical entry-level education for “Clinical Laboratory Technologists and Technicians” is a **bachelor’s degree**, whereas the typical entry-level education for “Phlebotomists” is a **postsecondary non-degree award** (Exhibit 9a).¹⁹

Exhibit 9a: National Educational Attainment for Clinical Lab Technicians²⁰

Occupational Title	Typical Entry-Level Education
Clinical Laboratory Technologists and Technicians	Bachelor's degree
Phlebotomists	Postsecondary non-degree award

Based on online job postings between January 1, 2018 and December 31, 2020 in Imperial County, employers posted a **high school diploma or vocational training** as the educational requirement for *Clinical Lab Technicians* (Exhibit 9b).²¹

Exhibit 9b: Educational Requirements for Clinical Lab Technicians in Imperial County²²



¹⁹ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

²⁰ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

²¹ Burning Glass Technologies, “Labor Insight Real-Time Labor Market Information Tool.” 2018-2020.

²² “Educational Attainment for Workers 25 Years and Older by Detailed Occupation,” Bureau of Labor Statistics, last modified September 4, 2019. bls.gov/emp/tables/educational-attainment.htm.

Exhibit 10 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2018 and December 31, 2020.

Exhibit 10: Top Skills for *Clinical Lab Technicians* in Imperial County²³

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Phlebotomy • Venipuncture • Life Support • Clerical Duties • Laboratory Testing • Customer Service • Cardiopulmonary Resuscitation • Specimen Collection • Blood Collection • Arterial Puncture • Laboratory Equipment • Cleaning • Data Entry • Microbiology • Occupational Health and Safety 	<ul style="list-style-type: none"> • Research • Detail-Oriented • Physical Abilities • Telephone Skills • Typing • Time Management • Work Area Maintenance • Communication Skills • Organizational Skills • Writing • Mentoring • Troubleshooting • Computer Literacy • English • Spanish 	<ul style="list-style-type: none"> • Microsoft Excel • Microsoft Word • Word Processing • Microsoft Access

²³ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

Exhibit 11 lists the top certifications that appeared in online job postings between January 1, 2018 and December 31, 2020.

Exhibit 11: Top Certifications for *Clinical Lab Technicians* in Imperial County²⁴

Top Certifications in Online Job Postings

1. Phlebotomy Certification
 2. Clinical Laboratory Technologist
 3. Basic Cardiac Life Support Certification
 4. Certified Medical Laboratory Technician
 5. American Society for Clinical Pathology (ASCP) Certification
 6. Basic Life Saving (BLS)
 7. Certified Radiology Technician
 8. Certified Medical Technologist
 9. American Registry of Radiologic Technologists (ARRT) Certification
 10. First Aid CPR AED
 11. Critical Care Registered Nurse (CCRN)
 12. Advanced Cardiac Life Support (ACLS) Certification
 13. Certified Medical Assistant
 14. Certified Emergency Nurse
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²⁴ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

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Important Disclaimers

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

This workforce demand report uses state and federal job projection data that was 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.