

**Program Endorsement Brief: 1205.00/Medical Laboratory Technology
Medical Laboratory Technician**

Orange County Center of Excellence, April 2021

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some Criteria Met <input type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
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 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: *medical and clinical laboratory technicians (29-2012)*. Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree.¹ Although the occupation in this report typically require a bachelor’s degree, it is considered middle-skill because more than one-third of workers in the field have completed some college or an associate degree. 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 occupations.

Based on the available data, there appears to be a supply gap for *medical and clinical laboratory technicians* in the region. Furthermore, more than one-third of workers in the field have completed an associate degree or some college, and entry-level wages exceed the living wage in both Los Angeles and Orange counties. **Therefore, due to all the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **784 jobs available annually** in the region due to new job growth and replacements, **which is more than the 83 awards conferred annually** by educational institutions in the region.
 - It is important to note that Emsi uses a single aggregate code that combines medical and clinical laboratory technologists (29-2011), which is an above middle-skill occupation, and medical and clinical laboratory technicians (29-

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.

2012). Since these two occupations are combined within the dataset, **it is likely that the demand and wage data for medical and clinical laboratory technicians is overstated.**

- Over the past 12 months, there were **4,500 online job postings related to medical and clinical laboratory technicians.** The highest number of job postings were for laboratory technicians, laboratory assistants, medical laboratory technicians, clinical laboratory technicians, and specimen processors
- **Living Wage Criteria** – Within Orange County, **typical entry-level hourly wages** for clinical laboratory technologists and technicians are **\$20.30, which is higher than the California Family Needs Calculator** hourly wage (living wage) for one adult in the region (\$17.36 in Orange County).²
- **Educational Criteria** –The Bureau of Labor Statistics (BLS) lists a **bachelor's degree** as the **typical entry-level education for clinical laboratory technologists and technicians.**
 - However, the national-level educational attainment data indicates **41.4% of workers in the field have completed some college or an associate degree.**

Supply:

- There are **2 community colleges** in the LA/OC region that issue awards related to medical laboratory technology, conferring an average of **42 awards annually** between 2016 and 2019.
- Between 2014 and 2017, there was an average of **41 awards conferred annually** in related training programs by non-community college institutions throughout the region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for *clinical laboratory technologists and technicians*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 4% through 2024. There will be nearly 800 job openings per year through 2024 due to job growth and replacements. It is important to note that Emsi uses a single aggregate code that combines *medical and clinical laboratory technologists* (29-2011), which is an above middle-skill occupation, and *medical and clinical laboratory technicians* (29-2012). Since these two occupations are combined within the dataset, it is likely that the demand and wage data for *medical and clinical laboratory technicians* is overstated.

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 impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

² Living wage data was pulled from California Family Needs Calculator on 4/14/2021. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	8,563	8,841	278	3%	561
Orange	3,085	3,310	225	7%	223
Total	11,648	12,152	504	4%	784

Wages

The labor market endorsement in this report considers the entry-level hourly wages for *clinical laboratory technologists and technicians* in Orange County as they relate to the county’s living wage. Los Angeles 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.

Orange County— The typical entry-level hourly wages for *clinical laboratory technologists and technicians* are \$20.30, which is above the living wage for one adult (\$17.36 in Orange County). Experienced workers can expect to earn wages of \$42.41, which is higher than the living wage estimate. Orange County’s average wages are above the average statewide wage of \$30.30 for this occupation.

Los Angeles County— The typical entry-level hourly wages for *clinical laboratory technologists and technicians* are \$19.30, which is above the living wage for one adult (\$15.04 in Los Angeles County). Experienced workers can expect to earn wages of \$40.35, which is higher than the living wage estimate. Los Angeles County’s average wages are below the average statewide wage of \$30.30 for this occupation.

Job Postings

There were 4,500 online job postings related to *medical and clinical laboratory technicians* listed in the past 12 months. The highest number of job postings were for laboratory technicians, laboratory assistants, medical laboratory technicians, clinical laboratory technicians, and specimen processors. The top skills were: quality assurance and control, phlebotomy, chemistry, data entry, and laboratory testing. The top three employers, by number of job postings, in the region were: University of California, Prime Healthcare Services, and University of Southern California.

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 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 a bachelor’s degree as the typical entry-level education for *clinical laboratory technologists and technicians*. However, the national-level educational attainment data indicates 41.4% of workers in the field have completed some college or an associate degree. Of the 70% of *medical and clinical laboratory technician* job postings listing a minimum education requirement in Los Angeles/Orange County, 59% (1,849) requested a high

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.

school diploma, 29% (919) requested a bachelor’s degree and 12% (388) requested an associate degree.

Educational Supply

Community College Supply—Exhibit 2 shows the three-year average number of awards conferred by community colleges in the related TOP code: Medical Laboratory Technology (1205.00). The colleges with the most completions in the region are: Saddleback and Mt. San Antonio. 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), 2016-2019

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
1205.00	Medical Laboratory Technology	Mt San Antonio	23	17	19	20
		LA Subtotal	23	17	19	20
		Saddleback	26	24	18	23
		OC Subtotal	26	24	18	23
Supply Total/Average			49	41	37	42

Non-Community College Supply—For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for medical laboratory technologists and/or technicians. Exhibit 3 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code: Clinical Laboratory Science/Medical Technology/Technologist (51.1005). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, four-year colleges in the region conferred an average of 41 awards annually in related training programs.

Exhibit 3: Regional non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
51.1005	Clinical Laboratory Science/Medical Technology/Technologist	CSU-Dominguez Hills	35	44	44	41
		CSU-Los Angeles	-	1	-	0
Supply Total/Average			35	45	44	41

Appendix A: Occupational demand and wage data by county

Exhibit 4. Orange County

Occupation (SOC)	2019 Jobs	2024 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)
Clinical Laboratory Technologists and Technicians (29-2018)	3,085	3,310	225	7%	223	\$20.30	\$27.78	\$42.41

Exhibit 5. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 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)
Clinical Laboratory Technologists and Technicians (29-2018)	8,563	8,841	278	3%	561	\$19.30	\$26.42	\$40.35

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings
Clinical Laboratory Technologists and Technicians (29-2018)	11,648	12,152	504	4%	784

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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