

# Central Sterile Processing

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

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*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.*

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## Summary

- Community college hospital central service technician programs provide the knowledge, skills, and abilities that lead to the medical equipment preparer occupation.
- Employment is expected to increase by 11% through 2025, with 85 job openings available annually over this period.
- This occupation's median (50th percentile) hourly earnings are \$22.44 per hour, below the regional \$24.36 per hour self-sustainable earnings standard for a single adult with one child.
- Regional community colleges do not currently offer hospital central service technician programs.
- The Centers of Excellence recommends developing a hospital central service technician program to meet the regional demand for medical equipment preparers. For more information, see the [recommendation section](#).

## Introduction

This report aims to quantify regional supply and demand related to central sterile processing in the Inland Empire/Desert Region. California Community College hospital central service technician (TOP 1209.00) programs prepare students for employment as medical equipment preparers through instruction related to the services and techniques used in support of patient care, such as receipt, evaluation, storage, and distribution of supplies, equipment, and instruments, including sterile processing (Taxonomy of Programs, 2012). The knowledge, skills, and abilities trained by this program leads to the medical equipment preparers occupation.

### **Medical Equipment Preparers (31-9093)**

Prepare, sterilize, install, or clean laboratory or healthcare equipment. May perform routine laboratory tasks and operate or inspect equipment.

**Sample job titles:** Central Processing Technician (CPT), Central Service Technician (CST), Central Sterile Supply Technician (CSS Technician), Certified Registered Central Service Technician (CRCST), Instrument Technician, Sterile Preparation Technician, Sterile Processing and Distribution Technician (SPD Tech), Sterile Processing Technician (Sterile Processing Tech), Sterile Technician, Sterilization Technician

*Entry-Level Educational Requirement: High school diploma or equivalent*

*Work Experience Required: None*

*Training Requirement: Between one and twelve months of on-the-job training*

*Incumbent workers with a Community College Award or Some Postsecondary Coursework: 48%*

## Job Counts and Projections

In 2020, there were 632 medical equipment preparer jobs in the Inland Empire/Desert Region. Employment for this occupation is expected to grow by 11% through 2025. Over this period, there are 85 annual job openings projected for medical equipment preparers. Exhibit 1 displays the job counts, five-year projected job growth, job openings, and the share of incumbent workers age 55 years and greater in the region.

*Exhibit 1: Five-year projections, 2020-2025*

2020 Jobs	2025 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
632	703	11%	424	85	21%

Source: Emsi 2021.3

A search of online job advertisements (ads) for medical equipment preparer jobs over the last 12 months revealed the details about the employers seeking these workers, including the time it takes to fill positions, earnings information, and in-demand skills. Over the previous 12 months, 150 job advertisements were posted for medical equipment preparers in the region. On average, regional employers fill online job ads for medical equipment preparers within 31 days, one day shorter than the statewide average. This indicates that regional employers face similar challenges filling open positions as other employers in California. Exhibit 2 shows the number of job ads posted during the last 12 months.

*Exhibit 2: Job ads and time to fill*

Job Ads	Regional Average Time to Fill (Days)	Statewide Average Time to Fill (Days)
150	31	32

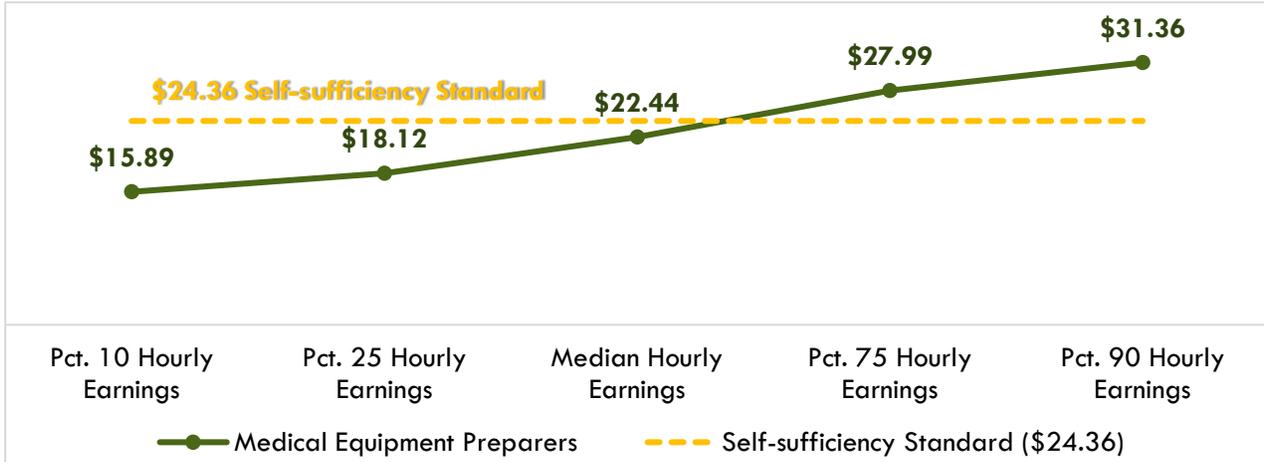
Source: Burning Glass – Labor Insights

## 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.

This occupation's median (50th percentile) hourly earnings are \$22.44 per hour, below the regional \$24.36 per hour self-sustainable earnings standard for a single adult with one child. The 75<sup>th</sup> percentile hourly earnings exceed the self-sustainability standard, indicating that only the top 25% of workers in the field earn a self-sustainable wage. Exhibit 3 displays the hourly earnings for medical equipment preparers.

Exhibit 3: Hourly earnings by percentile



Source: Emsi 2021.3

According to the occupational guides developed by the California Labor Market Information Division, benefits for medical equipment preparers typically receive medical insurance, vacation and sick leave, and retirement plans (Detailed Occupational Guides, 2021).

### Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for medical equipment preparers over the last 12 months. Online job ad salary information reveals that employers are willing to pay medical equipment preparers a median annual salary of \$44,000, below the region's \$51,452 annual (\$24.36 hourly) self-sufficiency standard. Consider the salary information with caution since only 17% (26 out of 150) of online job ads for this occupation provided salary information. The salary figures are prorated to reflect full-time, annual earnings status.

Exhibit 4: Advertised salary information

Number of job ads	Real-Time Salary Information				Median Annual Salary
	Less than \$35,000	\$35,000 to \$49,999	\$50,000 to \$74,999	More than \$75,000	
26	4%	61%	35%	-	\$44,000

Source: Burning Glass – Labor Insights

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

Exhibit 5 displays the job titles most frequently included in ads for medical equipment preparers over the last 12 months. Displaying job titles may provide some insight into the positions sought by employers posting job advertisements for medical equipment preparers.

*Exhibit 5: Job titles most frequently included in job ads for medical equipment preparers*

Job Titles	Job Ads
Sterile Process Technician	43
Central Service Technician	27
Sterile Process Technician I	14
Central Supply Technician	7
Sterile Process Technician Lead	4
<i>All other job titles</i>	55
<b>Total</b>	<b>150</b>

Source: Burning Glass – Labor Insights

Exhibit 6 displays the employers that posted five or more job ads for medical equipment preparers over the last 12 months. Showing employer names provides some insight into where students may find employment after completing a program. Loma Linda University Health posted the most job advertisements for medical equipment preparers over the last 12 months.

*Exhibit 6: Employers posting the most job ads for medical equipment preparers*

Top Employers	Job Ads
Loma Linda University Health	35
Kaiser Permanente	12
Arrowhead Regional Medical Center	8
Eisenhower Medical Center	8
Dignity Health (Community Hospital of San Bernardino)	7
San Antonio Regional Hospital	7
Desert Regional Medical Center	6
<i>All other employers</i>	67
<b>Total</b>	<b>150</b>

Source: Burning Glass – Labor Insights

Exhibit 7 lists a sample of specialized and employability skills employers' seek when looking for workers to fill medical equipment preparer 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 ads may be utilized to guide curriculum development.

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

Specialized skills (n=126)	Employability skills
<ul style="list-style-type: none"> <li>• Sterile Procedures/Techniques</li> <li>• Cleaning</li> <li>• Surgical Instruments</li> <li>• Quality Assurance and Control</li> <li>• Equipment/Instrument Sterilization</li> </ul>	<ul style="list-style-type: none"> <li>• English</li> <li>• Writing</li> <li>• Communication Skills</li> <li>• Teamwork/Collaboration</li> <li>• Detail-Oriented</li> </ul>

Source: Burning Glass – Labor Insights

According to the Bureau of Labor Statistics, approximately 48% 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 vast majority (95%) of employers seeking medical equipment preparers 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 medical equipment preparers.

*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
High school diploma or equivalent	48%	87	95%	5%	-

Source: Emsi 2021.3, 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 and the real-time work experience requirements from employer job ads for medical equipment preparers. Most 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 ads	0 – 2 years	3 – 5 years	6+ years
None	112	89%	11%	-

Source: Emsi 2021.3, Burning Glass – Labor Insights

Exhibit 10 displays the certifications required by employers posting job ads for medical equipment preparers in the Inland Empire/Desert Region. The International Association of Healthcare Central Service Material

Management (IAHCSMM) issues central service technician certifications. The Certified Registered Central Service Technician (CRCST) certification ensures that individuals have the requisite knowledge and skills to provide competent services as a central service technician. This certification was included in 51% of job advertisements for medical equipment preparers over the last 12 months. For more information about medical equipment preparer certifications and requirements, visit the IAHCSMM website (IAHCSMM, 2021).

*Exhibit 10: Certifications most frequently required by employers*

Certification (n=92)	Job Ads
IAHCSMM Certified Registered Central Service Technician (CRCST) Certification	47
Basic Life Support (BLS)	29
Driver's License	28

Source: Burning Glass – Labor Insights

## Student Completions and Programs Outcomes

According to the Chancellor's Office Curriculum Inventory (COCI), community colleges do not currently offer hospital central service technician (TOP 1209.00) programs in California.

### Recommendation

Community college hospital central service technician programs provide the knowledge, skills, and abilities that lead to the medical equipment preparer occupation. Employment for medical equipment preparers is expected to increase by 11% through 2025, with 85 job openings annually in the Inland Empire/Desert Region. This occupation's 75<sup>th</sup> percentile hourly earnings surpass the regional self-sustainability rate, indicating that only the top 25% of workers in this field earn a self-sustainable wage.

Regional colleges do not currently offer hospital central service technician (TOP 1209.00) programs.

The Centers of Excellence recommends developing a hospital central service technician program to meet regional demand for medical equipment preparers. Colleges considering this program should partner with applicable employers to document their demand for medical equipment preparers and the skills needed for students to earn self-sustainable earnings after exiting the program.

#### Contact

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October 2021

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## Appendix: Methodology

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. 2020 to 2025 job growth, wages, entry-level education, training, and work experience required for medical equipment preparers in the Inland Empire/Desert Region (Riverside and San Bernardino counties combined)

Occupation (SOC)	2020 Jobs	5-Year Change (New Jobs)	5-Year % Change (New Jobs)	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10 <sup>th</sup> to 90 <sup>th</sup> percentile)	Median Hourly Wage (50 <sup>th</sup> percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Medical Equipment Preparers (31-9093)	632	71	11%	85	\$15.89 to \$31.36	\$22.44	\$47,700	High school diploma or equivalent & 1-12 months	None

Source: Emsi 2021.3