

LABOR MARKET ANALYSIS

FOR PROGRAM RECOMMENDATION



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

STERILE PROCESSING TECHNICIANS IN THE GREATER SACRAMENTO REGION

North (Greater Sacramento)
Center of Excellence

SEPTEMBER 2023

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SUMMARY

The North (Greater Sacramento) Center of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled careers in the North (Greater Sacramento) subregion. This report aims to determine if demand in the local labor market is unmet by the supply from existing community college programs and other postsecondary training providers.

This report primarily focuses on training that leads to jobs in middle-skilled occupations - jobs that typically require education beyond a high school diploma but less than a bachelor's degree - but may include higher-skilled occupations for training pathways that lead to a bachelor's degree. Lowered skilled occupations are rarely considered in this analysis due to the lessened barriers for entry-level work, such as no formal education and fewer on-the-job training requirements.

Key findings include:

- The North (Greater Sacramento) subregion held 643 sterile processing technology and technician jobs in 2022. Sterile processing technology and technician jobs are projected to increase by 9% over the next five years, adding 60 new jobs to the subregion by 2027.
- Over the next five years, sterile processing technology and technician jobs are projected to have 107 annual openings in the North (Greater Sacramento) subregion.
- Wage data shows that sterile processing technology and technicians earn \$5 above the subregion's living wage of \$18.72 per hour. (See Appendix B for notes about the updated living wage).
- Awards data analysis shows that North (Greater Sacramento) training providers did not confer any awards (certificates and associate degrees) in Surgical Technician (1217.00) programs over the last three academic years.

Recommendations include:

- The North (Greater Sacramento) Center of Excellence recommends moving forward with developing a new program related to sterile processing technicians.

INTRODUCTION

The North (Greater Sacramento) Center of Excellence (COE) was asked to provide labor market information for a proposed program at a regional community college. This report focuses on the following Standard Occupational Classification (SOC) occupations and codes:

- These middle-skill occupations require more education and training beyond a high school diploma but usually less than a four-year degree:
 - Medical Equipment Preparers (31-9093)

A review of related programs revealed the following Taxonomy of Programs (TOP) title(s) and code(s) are appropriate for inclusion in this report:

- Surgical Technician (1217.00)

The corresponding Classification of Instructional Program (CIP) title(s) and code(s) are:

- Sterile Processing Technology/Technician (51.1012)

OCCUPATIONAL DEMAND

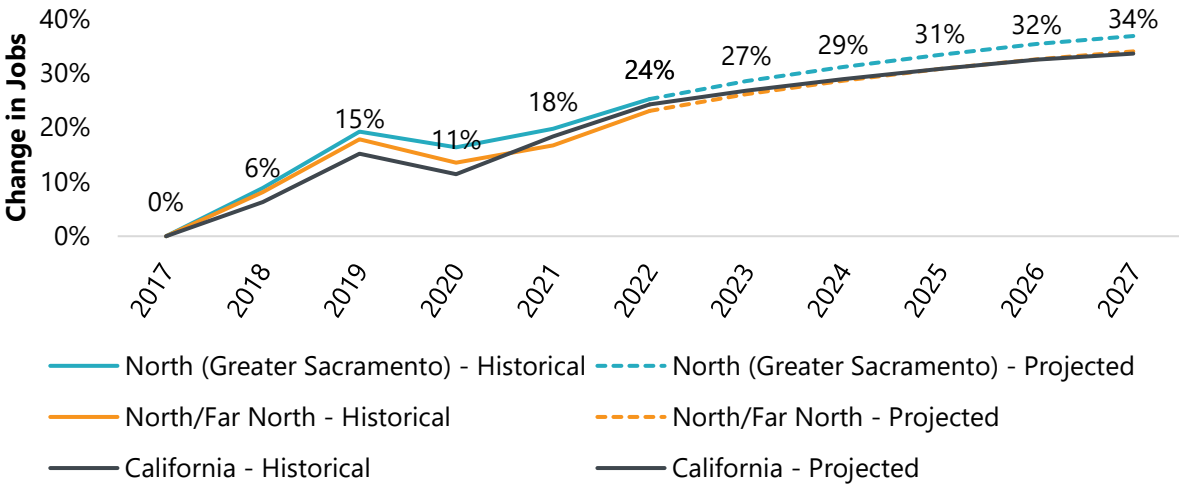
Exhibit 1 summarizes the five-year projected job growth for the studied occupations in North (Greater Sacramento)¹, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2022-2027

Occupation	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	2022-2027 Annual Openings
Medical Equipment Preparers	643	703	60	9%	107
North (Greater Sacramento)	643	703	60	9%	107
Medical Equipment Preparers	840	915	75	9%	139
North/Far North	840	915	75	9%	139
Medical Equipment Preparers	8,541	9,184	643	8%	1,380
California	8,541	9,184	643	8%	1,380

Exhibit 2 compares the net changes in jobs between 2017 through 2022 and the projected changes through 2027. The rate of change is indexed to the total number of jobs in 2017.

Exhibit 2. Changes in employment, 2017-2027

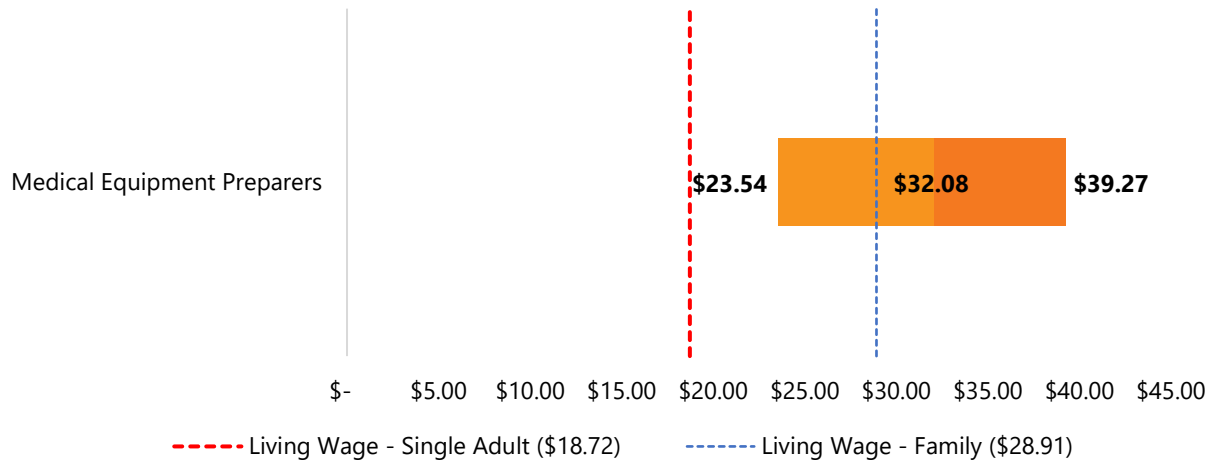


¹ The North (Greater Sacramento) subregion covers seven counties, including El Dorada, Nevada, Placer, Sacramento, Sutter, Yolo, and Yuba.

Wages

Exhibit 3 compares the 25th percentile, median, and 75th percentile hourly wages for the selected occupations to the Greater Sacramento living wage for one working adult (\$18.72 per hour) and a small family (\$28.91 per hour).^{2,3} The 25th and 75th percentile hourly wages are used to estimate entry-level and experienced worker wages.

Exhibit 3. Hourly wages by occupation, 2022



² Living wage is defined as the level of income one working adult with no children must earn to meet basic needs, including food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs. Please note that the 25th-percentile and 75th-percentile hourly wages are used as proxy for entry-level and experienced-level wages.

³ A small family is defined as one working adult and one school aged child (between the ages of 5 and 12 years).

JOB POSTINGS

About Job Postings Analysis

This section analyzes recent data from online job postings. Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends. However, please note that job postings are not the same as labor market demand; demand is based on projected annual openings. Job postings should be used to support inform community college curriculum development and to identify potential employers for targeted experiential learning opportunities.

Please note that there are several limitations to analyzing and interpreting online job postings. Employers may post a position multiple times to increase the number of job applicants. Job postings may remain online after a business chooses not to fill a position. Employers may advertise one posting to fill multiple vacancies. And, not all jobs are posted online.

The North COE identified 204 online job postings for the selected occupations in the seven-county Greater Sacramento subregion. Job posting data comes from Lightcast (formerly Emsi Burning Glass) and represents unique advertisements newly posted online during the last 12 months, from September 2022 through August 2023.

Top Employers and Job Titles

Exhibit 4 details the number of online job postings for the selected occupations.

Exhibit 4. Job postings by occupation

Occupation	Unique Job Postings	Share of Job Postings
Medical Equipment Preparers	204	100%

Exhibit 5 shows the top 10 relevant job titles with the most job postings.

Exhibit 5. Top jobs titles

Job Title	Number of Job Postings
Sterile Processing Technicians	115
Instrument Technicians	14
Sterile Processing Supervisors	11
Central Sterile Processing Technicians	10
Lead Process Technicians	8
Equipment Coordinators	6
Special Procedures Technicians	6
Pathology Technicians	4
Endoscopic Specialists	4

Exhibit 6 shows the top 10 relevant employers with the most job postings for the selected occupations.

Exhibit 6. Top Employers

Employer	Number of Job Postings
Kaiser Permanente	27
University of California	25
UC Davis Health	20
Sutter Health	15
CommonSpirit Health	12
Evergreen Technologies	9
Cambay Healthcare	9

Employer	Number of Job Postings
United Surgical Partners International	8
United States Department of Veterans Affairs	5
Mercy San Juan Medical Center	4

Top Skills and Qualifications

Exhibit 7 shows the most relevant certifications requested by employers for the selected occupations.

Exhibit 7. Most in-demand certifications

Certification	Job Postings	Share of Job Postings
Certification Board For Sterile Processing and Distribution (CBSPD) Certification	81	40%
Healthcare Sterile Processing Association (HSPA)	47	23%
Certified Registered Central Service Technician (CRCST)	33	16%
Basic Life Support (BLS) Certification	33	16%
Central Supply Processing Department Technician (CSPDT)	24	12%

Exhibit 8 shows the top 10 skills across three categories for the studied occupations: specialized, essential, and software skills.⁴

Exhibit 8. Most in-demand skills

Specialized Skills	Common Skills	Software Skills
Sterile Processing	Management	Business Software
Sterilization	Packaging And Labeling	Disassembler
Surgical Instruments	Record Keeping	Microsoft Excel
Operating Room (OR)	Communications	Microsoft Outlook
Disinfecting	Computer Literacy	Microsoft Office
Infection Control	Lifting Ability	Procore
Decontamination	Quality Assurance	Epic EMR
Medical Terminology	Written English	SAP Knowledge Warehouse
Endoscopy	Teamwork	Windows Service
Surgery	Word Processing	--

⁴ Specialized skills are those primarily required to perform specific tasks in an occupation. Essential skills are typically related to employability. These are skills that are prevalent across many occupations, and include both interpersonal attributes and learned skills (aka "soft skills"). Software skills are specific to any software tool or programming component used to support a job.

Exhibit 9 shows the minimum level of education, preferred by employers, for related job postings in the Greater Sacramento subregion.⁵

Exhibit 9. Employer-preferred education

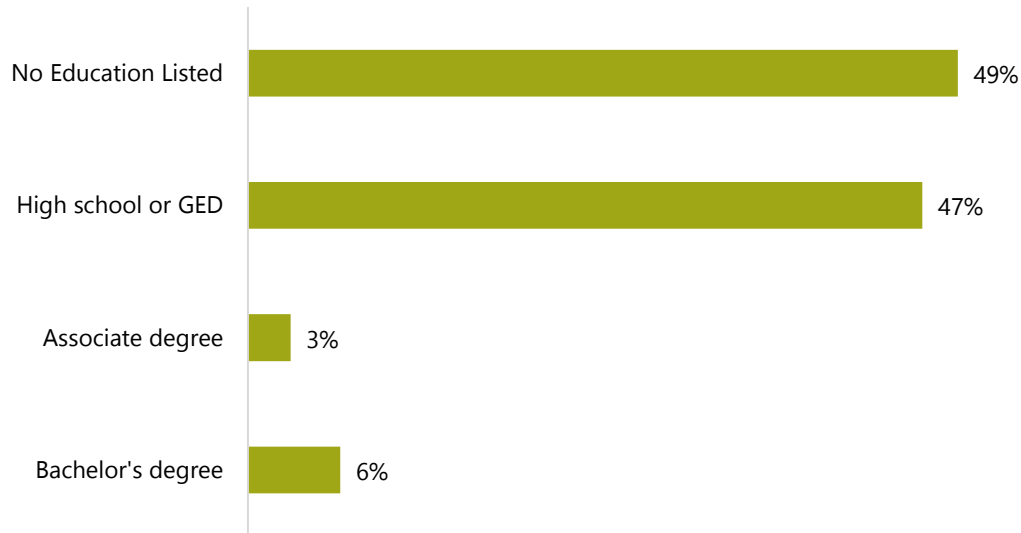
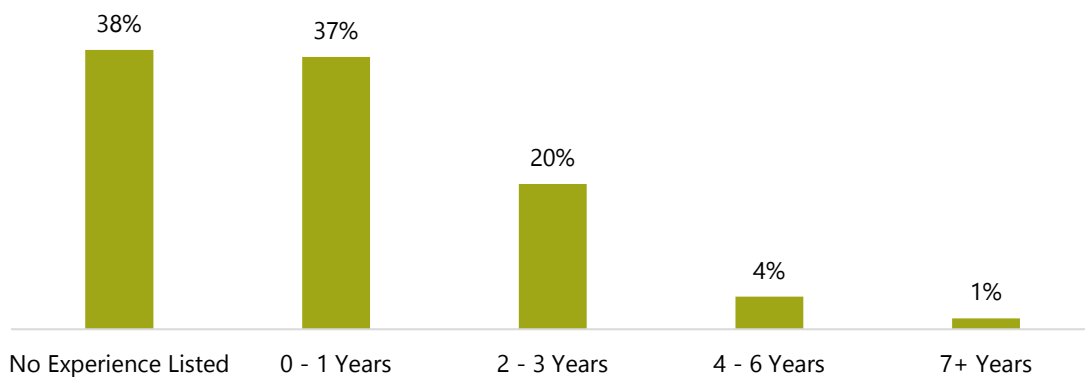


Exhibit 10 shows the minimum level of experience, preferred by employers, for related job postings in the Greater Sacramento subregion.⁶

Exhibit 10. Employer-preferred job experience



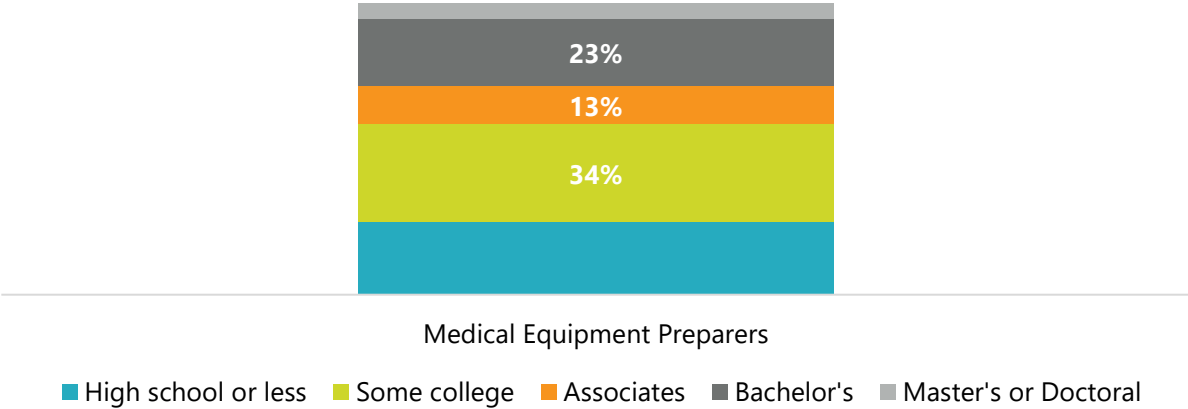
⁵ Employers may include more than one level of education as a hiring requirement in a job posting. As a result, the values in exhibit 9 may sum to greater than 100%.

⁶ Employers may include more than one level of experience as a hiring requirement in a job posting. As a result, the values in exhibit 10 may sum to greater than 100%.

EDUCATION AND TRAINING REQUIREMENTS

The U.S. Census Bureau collects data on the highest education level achieved by workers across all occupations. Exhibit 11 shows California's educational attainment of the current workforce in the selected occupations.

Exhibit 11. California educational attainment for selected occupations, 2019



The U.S. Bureau of Labor Statistics (BLS) uses a categorical system to assign typical entry-level education and job requirements to each occupation for which the BLS publishes projection data. These categories include entry-level education, work experience in a related occupation, and on-the-job training. Exhibit 12 shows the selected occupations' typical entry-level job requirements.

Exhibit 12. Typical entry-level job requirements

Occupation	Entry-level Education Requirements	Work Experience Requirements	On-The-Job Training Requirements
Medical Equipment Preparers	High school diploma or equivalent	None	Moderate-term on-the-job training

EDUCATIONAL SUPPLY

Educational supply for an occupation can be estimated by analyzing the number of awards issued in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. Exhibit 13 shows the TOP and CIP codes for educational programs related to the selected occupations.

Exhibit 13. TOP and CIP codes for training programs related to the selected occupations

TOP Programs and Codes	Aligned CIP Programs and Codes
Surgical Technician (1217.00)	Sterile Processing Technology/Technician (51.1012)

Community College Supply

No community college programs in the Greater Sacramento subregion conferred any awards or certificates over the last three academic years.

Other Postsecondary Supply

Non-community college training providers did not confer any awards in the Greater Sacramento subregion. Please note that non-community college data often lags by one year and other post-secondary awards data covers a two-year average due to taxonomy update from the 2010 to 2020 CIP codes.

FINDINGS

This report focuses on one occupation in the sterile processing technology pathway: medical equipment preparers.

Occupational Demand

- The Greater Sacramento subregion held 643 sterile processing technology jobs in 2022. These jobs are projected to increase by 9% over the next five years, adding 60 new jobs to the subregion by 2027.
- Jobs for sterile processing technicians are projected to grow at a faster rate in the Greater Sacramento subregion than in California.
- Over the next five years, sterile processing technology jobs are projected to have 107 annual openings in the Greater Sacramento subregion.

Wages

- Analysis of wage data shows that sterile processing technicians occupations earn \$5 more than the single adult living wage of \$18.72 per hour.
- Median hourly wages are \$3 above the living wage for a small family (\$28.91 per hour).

Job Postings

- In the last 12 months, there were 204 online job postings for sterile processing technology and technician occupations.
- The top job title was sterile processing technicians, which was in 56% of online job postings.

Education and Training Requirements

- 47% of incumbent workers in the studied occupations have educational attainment levels consistent with community college offerings (some college or associate degrees). Another 23% of workers in these occupations hold a bachelor's degree.
- In terms of the minimum level of education preferred by employers, 47% listed a high school diploma or GED.

Postsecondary Supply

- No Greater Sacramento community colleges offer degrees and certificates in programs related to sterile processing technology and technicians over the last three academic years (2019-20 through 2021-22).
- Non-community college training providers did not confer any awards in the Greater Sacramento subregion. Please note that non-community college data often lags by one

year and other post-secondary awards data covers a two-year average due to taxonomy update from the 2010 to 2020 CIP codes.

RECOMMENDATIONS

- Based on a comparison of annual openings to average annual awards in the Greater Sacramento subregion, there seems to be an undersupply between educational supply and occupational demand.
 - Community colleges and other postsecondary training providers did not issue any awards over the last three years.
 - There are 107 projected annual openings for sterile processing technology and technician jobs.
- The North (Greater Sacramento) Center of Excellence recommends moving forward with developing a new program related to sterile processing technicians.

New Program Recommendation		
Move forward with the new program	Proceed with caution	A new program is not recommended
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX A. METHODOLOGY AND SOURCES

This report identified Occupations using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and O*Net OnLine. This report's findings were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

"The Chancellor's Office Curriculum Inventory System (COCI)." California Community Colleges Curriculum Inventory (COCI), 2023. <https://coci2.ccctechcenter.org/>.

Glasmeier, Amy K. "Living Wage Calculator." Living Wage Calculator, 2023. <https://livingwage.mit.edu/>.

Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. <https://nces.ed.gov/ipeds/>.

Labor Market Information Division. California Employment Development Department. <https://labormarketinfo.edd.ca.gov/>.

Lightcast (Formerly EMSI/Burning Glass) 2023.3; QCEW Employees, Non-QCEW Employees, and Self-Employed. <https://www.economicmodeling.com/>. (Note: EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors)).

Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.

O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOL ETA). <https://www.onetonline.org/>.

Self-Sufficiency Standard Tool for California. The University of Washington. <http://www.selfsufficiencystandard.org/>

"Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx>

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. June 2021 Edition. <http://coecc.net/>

APPENDIX B. GLOSSARY

Key Terms	Definition
Occupation	<p>Occupation refers to a category of jobs, careers, or professions that are similar regarding the work performed and the skills the workers possess. Workers who perform essentially the same tasks are in the same occupation, whether in the same industry. Some occupations are concentrated in a few industries, while others are found in many industries.</p> <p>Occupations differ from jobs in that jobs show the number of positions held in each occupation.</p>
Jobs	<p>A job is a specific instance of employment and includes any position where a worker provides labor for monetary compensation.</p> <p>Job numbers include employees (those who work for businesses) and proprietors (those who work for themselves). Full- and part-time jobs are included and counted equally (i.e., not adjusted to full-time equivalents). Data for jobs, or employment, are annual averages.</p>
Employment	<p>Employment refers to filled jobs, whether full- or part-time, temporary or permanent. The scope of "who" is counted as employed is noted in Appendix A. Methodology and Sources.</p>
Job Change	<p>Job change is the net increase or decrease of jobs over a given timeframe.</p>
Job Opening	<p>Job openings are the projected number of positions available for workers entering an occupation.</p> <p>Openings include growth and replacement job counts. Growth job counts are the positive change in the total number of workers employed. Replacement job counts are the estimates of new workers needed to replace workers permanently leaving the occupation.</p>
Percentile Wage (or wages)	<p>A percentile wage is the value of a wage at which a certain percentage of workers falls below. For example, a 25th percentile hourly wage of \$15.00 indicates that 25% of workers earn less than \$15.00, while 75% earn more. Percentile wages are specific to the geography shown in the report.</p> <p>The 25th-percentile and 75th-percentile hourly wages are used as a proxy for entry-level and experienced-level wages.</p>
Living Wage	<p>The living wage is the level of income a single, working adult with no children must earn to meet basic needs. The living wage is calculated using basic allowances for food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs, and assumes full-time employment (40 hours per week, 52 weeks a year).</p>

Key Terms	Definition
	Beginning in 2023-24, NFN COE adopted the MIT calculations for a living wage better aligned to the economic conditions following the pandemic. For additional information, please visit https://livingwage.mit.edu/ .
Educational Attainment	Educational attainment is the highest level of education achieved by workers in an occupation. The data include workers aged 25 years and older.
Typical Entry-level Education	<p>The education level most workers need to gain employment in an occupation. Categories range from "no formal educational credential" and "high school diploma or equivalent" to "doctoral or professional degree." The types most relevant to community training are "some college, no degree," "postsecondary nondegree award," and "associate degree."</p> <p>The typical entry-level education may differ from the actual educational levels attained by workers employed in an occupation.</p>
Typical Work Experience	The relevant prior experience a worker needs to gain employment in an occupation. Categories include "5 years or more", "less than five years," and "none."
Typical On-The-Job (OTJ) Training	The level of on-the-job training a worker needs to obtain for competency in the skills required for an occupation. Categories include "none," "short-term (1 month or less)," "moderate-term (more than one month but less than 12 months)," "long-term (more than 12 months)," "apprenticeship," and "internship/residency."
Awards	Awards are the number of certificates and degrees conferred for a specific course of study each year. Awards count "papers" and, as a result, may be greater than the number of students who complete a program.

Funding Acknowledgement: This report was made available with Strong Workforce Program funding from the North Far North Regional Consortium.

COVID-19 Statement: This report includes employment projection data produced by Lightcast (formerly EMSI). Employment projections are developed using models based on historical data, which in this set of projections covers the period through 2021. Most input data, therefore, precedes the pandemic. Employment projections are long-term projections intended to capture structural changes in the economy, not cyclical fluctuations. As such, projections data are not intended to capture the impacts of the recession that began in February 2020. Cyclical fluctuations, like recessions, impact projections when they become part of the historical data set.

Important Disclaimer: 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. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges, or their representatives based upon components or recommendations contained in this study.

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Centers of Excellence for Labor Market Research, Economic and
Workforce Development Program



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

**FOR MORE INFORMATION,
PLEASE CONTACT:**

Ebony J. Benzing,
Interim Director
North (Greater Sacramento)
Center of Excellence

Ebony.Benzing@losrios.edu

(916) 563 - 3215