

LABOR MARKET ANALYSIS

FOR PROGRAM RECOMMENDATION



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

GUNSMITHING IN THE NORTH/FAR NORTH

North/Far North
Center of Excellence

MAY 2022

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SUMMARY

The North/Far North of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled career pathways in the North/Far North region. 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 type of analysis due to the lessened barriers for entry-level work, such as no formal education and on-the-job training requirements.

Key findings include:

- The traditional labor market information provided represents a broad range of jobs beyond the scope of Gunsmithing.
- Analysis of job postings yielded opportunities for employment under the traditional employer-worker model, suggesting that many gunsmiths are self-employed. At this point, there is very little to no labor market data about gunsmiths.
- Lassen conferred an average of 26 awards (certificates and associate degrees) in Gunsmithing programs over the last three academic years (2018-19 through 2020-21).

Recommendations include:

- The North/Far North Center of Excellence does not recommend creating new gunsmithing programs at this point due to limited labor market data.
- The North/Far North Center of Excellence recommends that Lassen Community College move forward with chaptering its existing gunsmithing program at the Chancellor's Office.

INTRODUCTION

The North/Far North 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:

- Installation, Maintenance, and Repair Workers, All Other (49-9099)
- Assemblers and Fabricators, All Other (51-2099)
- Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic (51-4072)
- Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic (51-4081)
- Metal Workers and Plastic Workers, All Other (51-4199)

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

- Other Engineering and Related Industrial Technologies (0999.00)

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

- Gunsmithing/Gunsmith (47.0402)

Description of occupations included in this report:

Installation, Maintenance, and Repair Workers, All Other (49-9099)	
Description:	All installation, maintenance, and repair workers not listed separately.
Sample of reported job titles:	N/A

Assemblers and Fabricators, All Other (51-2099)	
Description:	All assemblers and fabricators not listed separately. Miscellaneous assemblers and fabricators.
Sample of reported job titles:	N/A

Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic (51-4072)

Description:	Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products.
Sample of reported job titles:	Core Machine Operator, Die Cast Technician, Diecast Machine Operator, Machine Operator, Mold Setter, Mold Technician, Molder, Process Technician, Production Technician

Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic (51-4081)

Description:	Set up, operate, or tend more than one type of cutting or forming machine tool or robot.
Sample of reported job titles:	Cell Technician, CNC Machine Setter (Computer Numerically Controlled Machine Setter), Fabrication Set-Up Person, Injection Molding Technician, Machine Operator, Machine Technician, Mold Setter, Production Operator, Shear Operator, Tooling Set-Up Person

Metal Workers and Plastic Workers, All Other (51-4199)

Description:	All metal workers and plastic workers not listed separately.
Sample of reported job titles:	N/A

OCCUPATIONAL DEMAND

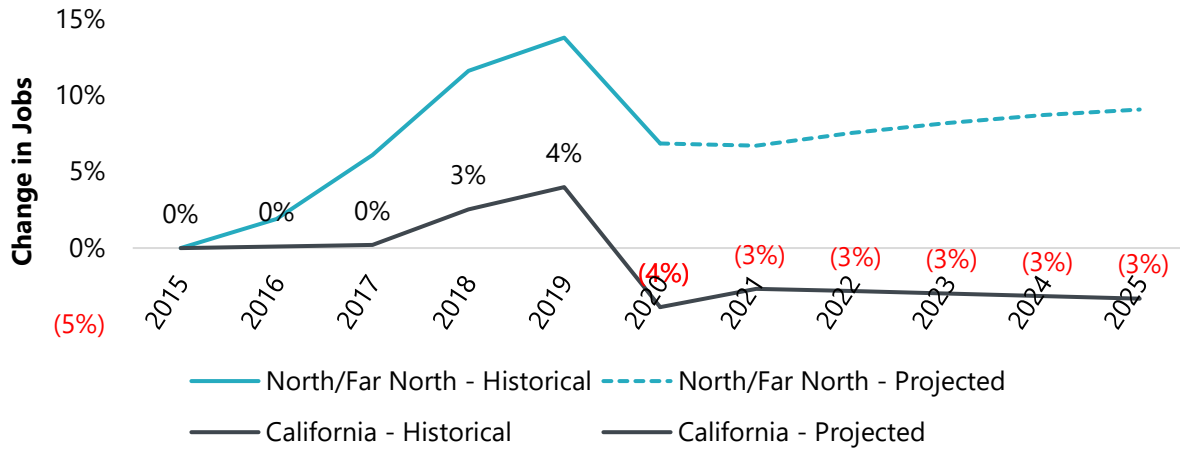
Exhibit 1 summarizes the five-year projected job growth for middle-skill and high-skill occupations in the North/Far North and California.

Exhibit 1. Employment and projected demand, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	2020-2025 Annual Openings
Installation, Maintenance, and Repair Workers, All Other	2,694	2,849	155	6%	318
Miscellaneous Assemblers and Fabricators	6,242	6,207	(34)	(1%)	680
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	321	363	42	13%	43
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	241	284	43	18%	35
Metal Workers and Plastic Workers, All Other	188	184	(4)	(2%)	20
North/Far North	9,686	9,887	201	2%	1,095
Installation, Maintenance, and Repair Workers, All Other	24,368	24,288	(80)	(0%)	2,589
Miscellaneous Assemblers and Fabricators	102,518	103,048	530	1%	12,164
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	7,669	7,582	(87)	(1%)	818
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	6,275	6,781	505	8%	786
Metal Workers and Plastic Workers, All Other	2,293	2,256	(38)	(2%)	243
California	143,123	143,955	831	1%	16,600

Exhibit 2 compares the percent change in jobs between 2015 through 2020 and the projected changes through 2025. The rate of change is indexed to the total number of jobs in 2015.

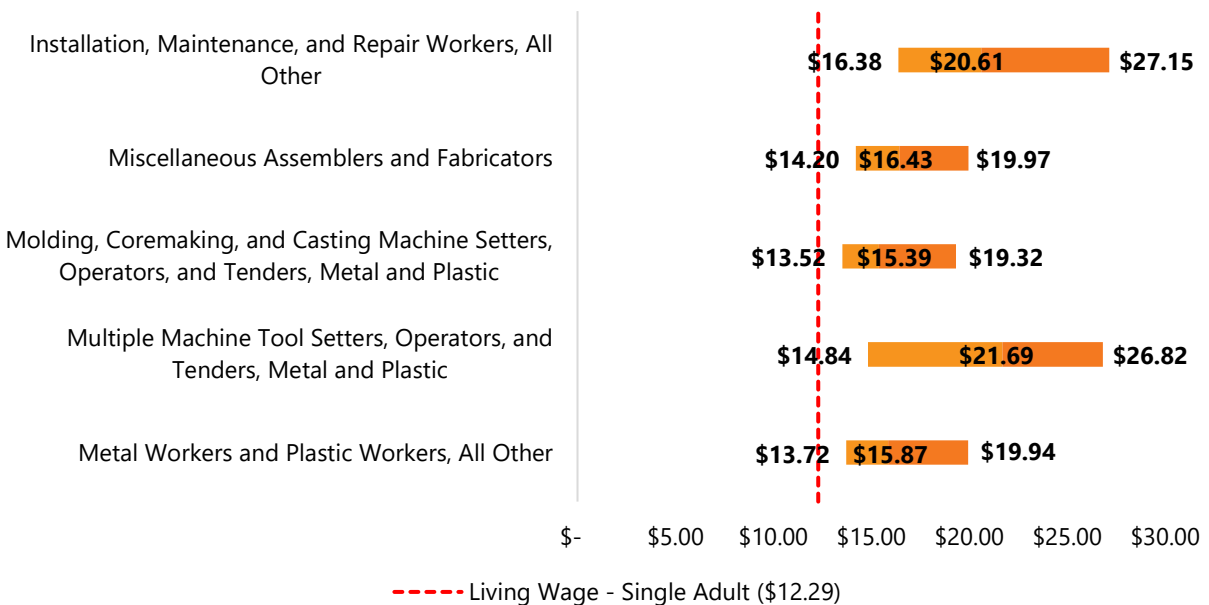
Exhibit 2. Changes in employment, 2015-2025



WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupations to the North/Far North living wage for a single adult - \$12.29 per hour.¹

Exhibit 3. Comparison of wages by occupation, 2020



¹ Living wage is defined as the level of income a single adult with no children must earn to meet basic needs, including food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs. The 25th-percentile and 75th-percentile hourly wages are used as proxy for entry-level and experienced-level wages.

JOB POSTINGS

This section analyzes recent data from online job postings (real-time LMI). Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends.

The North/Far North COE identified 638 online job postings for the selected occupations across the 22-county North/Far North region. Job posting data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from May 1, 2021, to April 30, 2022.

Occupations and Job Titles

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

Exhibit 4. Number of job postings by occupation

Occupation	Job Postings	Share of Job Postings
Installation, Maintenance, and Repair Workers, All Other	530	83%
Assemblers and Fabricators, All Other	95	15%
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	5	1%
Metal Workers and Plastic Workers, All Other	5	1%
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	3	0%
Total Job Postings	638	100%

Exhibit 5 shows the top 10 job titles with the most job postings and the share. All job postings included a job title. Most of the 150 job titles were for repair and service technicians, while none were for gunsmiths.

Exhibit 5. Top jobs titles

Job Title	Job Postings	Share of Job Postings
Service Technician	51	8%
Repair Technician	47	7%

Job Title	Job Postings	Share of Job Postings
Maintenance Mechanic	44	7%
Pool Technician	40	6%
Auto Service Technician - Consistent Workflow	36	6%
Entry Level Service Technician	32	5%
Senior Service Technician	30	5%
Master Service Technician	29	5%
Advanced Service Technician	23	4%
Pallet Repairman	15	2%

Job Postings for Gunsmiths

To identify real-time LMI for gunsmiths, the North/Far North COE conducted a job posting search for gunsmiths utilizing job titles and skills in the 22-county region of the North/Far North. Exhibit 6 summarizes the job titles and skills used in the job posting search.

The North/Far North COE identified 53 online job postings related to Gunsmithing in the North/Far North region posted within the last three years (January 1, 2019 - April 30, 2022). All identified job postings came from the job title search; a skills search resulted in 0 job postings.

Exhibit 6. Job title and skill search terms for Gunsmiths in NFN

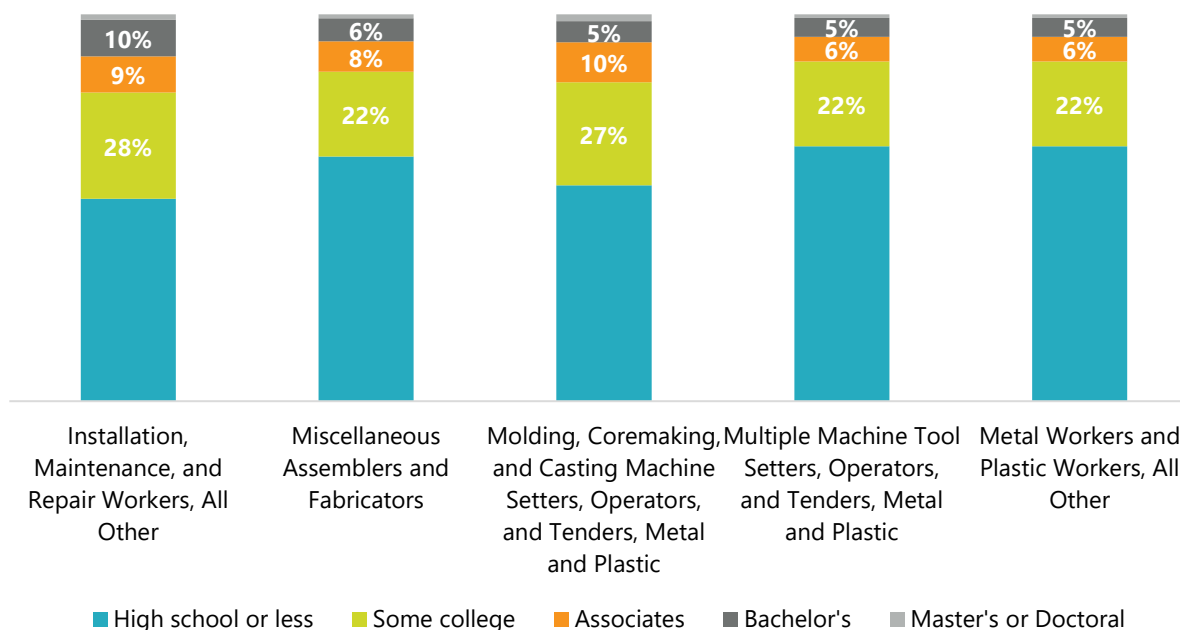
Job Titles (n = 53)	Skills (n = 0)
Gunsmith	Gunsmith
Gun smith	Firearm repair
Armorer	Firearm maintenance
Gun*	Weapon(s) repair
	Weapon(s) maintenance

* Note: Using the job title search term "Gun" resulted in 52 of the 53 job postings. However, most of these job postings were for jobs involving the sale/resale of firearms and related accessories (i.e., ammunition and safes) in retail shops (i.e., Bass Pro, Cabela's, Liberty Safes, etc.). Only one of the 53 job titles was explicitly for a gunsmith.

EDUCATION AND TRAINING

The U.S. Census Bureau and Bureau of Labor Statistics collected data on education achieved by workers employed in occupations. Exhibit 11 shows the national-level educational attainment of the current workforce in the selected occupations.

Exhibit 11. National worker educational attainment for selected occupations, 2019



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

Exhibit 12. Typical education, work experience, and on-the-job training requirements

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Installation, Maintenance, and Repair Workers, All Other	High school diploma or equivalent	None	Long-term on-the-job training
Miscellaneous Assemblers and Fabricators	High school diploma or equivalent	None	Moderate-term on-the-job training
Molding, Coremaking, and Casting	High school diploma	None	Moderate-term on-

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Machine Setters, Operators, and Tenders, Metal and Plastic	or equivalent		the-job training
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
Metal Workers and Plastic Workers, All Other	High school diploma or equivalent	None	Moderate-term on-the-job training

Certifications and Licensing

Gunsmithing is a federally licensed occupation. Individuals looking to sell and service firearms must hold a Federal Firearms License (FFL) from the Bureau of Alcohol, Tobacco, and Firearms (ATF).² Gunsmiths in California must also complete additional background checks and certifications through the State of California Department of Justice (DOJ) Bureau of Firearms.

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
Other Engineering and Related Industrial Technologies (0999.00)	Gunsmithing/Gunsmith (47.0402)

Gunsmithing Programs

Exhibit 14 lists current Gunsmithing programs available. Lassen Community College's Gunsmithing programs are the oldest (established in 1945) programs in the United States and the only NRA-approved gunsmithing programs offered in California.³

² Sourced from: <https://www.atf.gov/qa-category/gunsmiths?destination=qa-category/gunsmiths> on May 25, 2022.

³ Sourced from: <http://www.lassencollege.edu/academics/programs/Pages/Program-Costs.aspx> and <https://gunsmithing.nra.org/find-a-school/> on May 24, 2022.

Exhibit 14. Lassen's Gunsmithing Programs (as of May 24, 2022)

TOP Code	Program Title	Award Offered
Other Engineering and Related Industrial Technologies (0999.00)	General Gunsmithing	Associate in Science
	General Gunsmithing	Certificate of Achievement
	Firearms Repairs	Certificate of Achievement
	Long Gun	Certificate of Accomplishment
	Pistolsmith	Certificate of Accomplishment
	Riflesmith	Certificate of Accomplishment
	Gunsmith Machinist/Metal Finish	Certificate of Accomplishment

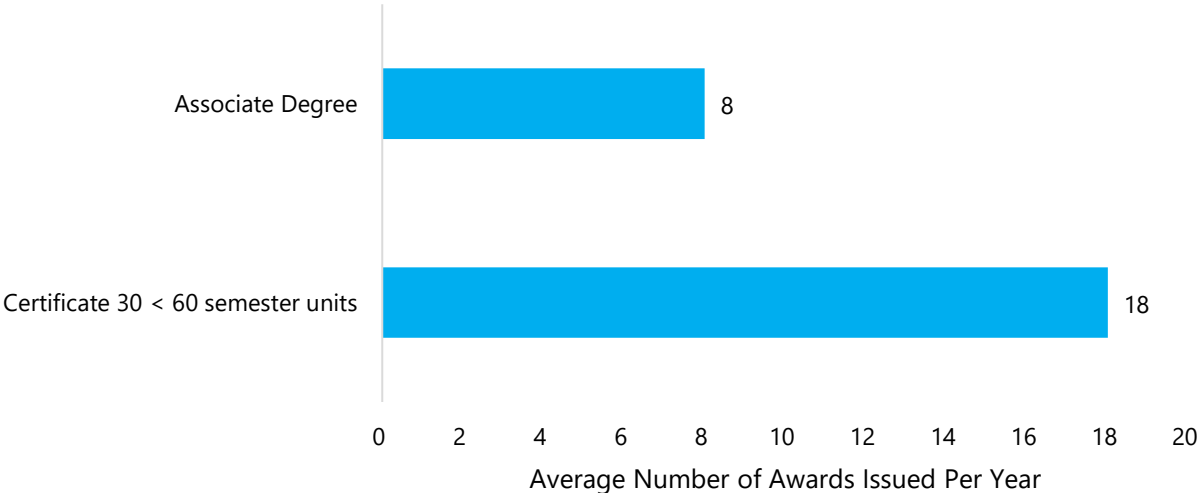
Community College Supply

Exhibits 15 and 16 compare the average number of certificates and degrees conferred in selected community college programs over the last three academic years.

Exhibit 15. Annual average community college awards by program, 2018-19 through 2020-21

Program - TOP Code	College	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Yr Annual Awards Average
Other Engineering and Related Industrial Technologies (0999.00)	Lassen	38	8	32	26
	Grand Total	38	8	32	26

Exhibit 16. Annual average community college awards by type, 2018-19 through 2020-21



FINDINGS

- This report focuses on Gunsmithing in the North/Far North region. A gunsmith is a person who repairs, modifies, designs or builds firearms or guns.⁴ Gunsmiths may also sell firearms.
- Five occupations were selected for inclusion in this report, including Installation, Maintenance, and Repair Workers, All Other (49-9099), Assemblers and Fabricators, All Other (51-2099), Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic (51-4072), Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic (51-4081), and Metal Workers and Plastic Workers, All Other (51-4199).
- Assessing labor market demand for Gunsmithing jobs is an inherently difficult task. There is no singular occupational code that aligns with the gunsmith job. Five occupations were selected for this report to approximate the size of the labor market. However, many other jobs exist within these occupations. As a result, the traditional labor market information provided represents a broad range of jobs beyond the scope of Gunsmithing.
- Analysis of job postings yielded opportunities for employment under the traditional employer-worker model, suggesting that many gunsmiths are self-employed. At this point, there is very little to no labor market data about gunsmiths.
- Lassen Community College's Gunsmithing programs are the oldest (established in 1945) programs in the United States and the only NRA-approved Gunsmithing programs offered in California. Lassen conferred an average of 26 awards (certificates and associate degrees) in Gunsmithing programs over the last three academic years (2018-19 through 2020-21).

⁴ Sourced from <https://www.atf.gov/firearms/docs/ruling/2015-1-manufacturing-and-gunsmithing> on May 24, 2022.

RECOMMENDATIONS

- There isn't enough data to conclude whether or not Lassen's Gunsmithing program is filling an unmet labor market need, and occupational demand data for gunsmiths is extremely limited.
- However, Lassen's Gunsmithing programs are unique, and despite a COVID-related drop in awards during the 2019-2020 academic year, interest in the program remains strong.
- The North/Far North Center of Excellence does not recommend creating new gunsmithing programs at this point due to limited labor market data.
- The North/Far North Center of Excellence recommends that Lassen Community College move forward with chaptering its existing gunsmithing program at the Chancellor's Office.

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.

Cal-PASS Plus LaunchBoard. California Community Colleges Chancellor's Office.

<https://www.calpassplus.org/LaunchBoard/Home.aspx>.

Emsi 2021.4; QCEW Employees, Non-QCEW Employees, and Self-Employed.

<https://www.economicmodeling.com/>. 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).

Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-2017.

Bureau of Labor Statistics. <https://www.bls.gov/emp/tables/educational-attainment.htm#>.

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

"Labor Insight Real-Time Labor Market Information Tool." Burning Glass Technologies.

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Labor Market Information Division. California Employment Development Department.

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[Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.aspx](https://www.coecc.net/Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.aspx)

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. November 2015 Edition. <http://coecc.net/>

COVID-19 Statement: This report includes employment projection data by EMSI. 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 or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they 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. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

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
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