

LABOR MARKET ANALYSIS

FOR PROGRAM RECOMMENDATION



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

EMERGENCY MEDICAL TECHNICIANS AND PARAMEDICS IN THE GREATER SACRAMENTO REGION

North (Greater Sacramento)
Center of Excellence

MARCH 2022

TABLE OF CONTENTS

Summary.....	3
Introduction.....	4
Occupational Demand.....	5
Wages	6
Job Postings.....	6
Occupations and Job Titles	6
Employers.....	7
Certifications, Skills, and Experience	8
Education and Training	10
Educational Supply.....	11
Community College Supply	11
Other Postsecondary Supply	13
Findings.....	14
Recommendations	15
Appendix A. Methodology and Sources.....	16

If, for any reason, this document is not accessible or if you have specific needs for readability, please contact us, and we will do our utmost to accommodate you with a modified version. To make a request, contact Ebony J. Benzing by phone at (916) 563-3215 or by email at Ebony.Benzing@losrios.edu.

SUMMARY

The North (Greater Sacramento) 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 (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 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 North (Greater Sacramento) subregion held 1,848 emergency medical technician and paramedic jobs in 2020. These jobs are projected to increase by 6% over the next five years, adding 116 new jobs to the subregion by 2025.
- Over the next five years, emergency medical technicians and paramedics are projected to have 157 annual openings in the North (Greater Sacramento) subregion.
- Wage data shows that emergency medical technicians and paramedics earn nearly \$5 above the subregion's living wage of \$14.53 per hour.
- Awards data analysis shows that North (Greater Sacramento) training providers conferred an average of 36 awards (certificates and associate degrees) in EMT training programs over the last three academic years.
- No North community college offers training for paramedics; all training programs are focused on emergency medical technicians.
- Sacramento State's College of Continuing Education and NCTI Roseville offer emergency medical technicians and paramedics training programs.

Recommendations include:

- The North (Greater Sacramento) Center of Excellence recommends moving forward with the program.
- The North (Greater Sacramento) Center of Excellence also recommends that community colleges explore creating a paramedic training pathway.

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 less than a four-year degree:
 - Emergency Medical Technicians and Paramedics (29-2041)

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

- Emergency Medical Services (1250.00)

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

- Emergency Medical Technology/Technician (EMT Paramedic) (51.0904)

OCCUPATIONAL DEMAND

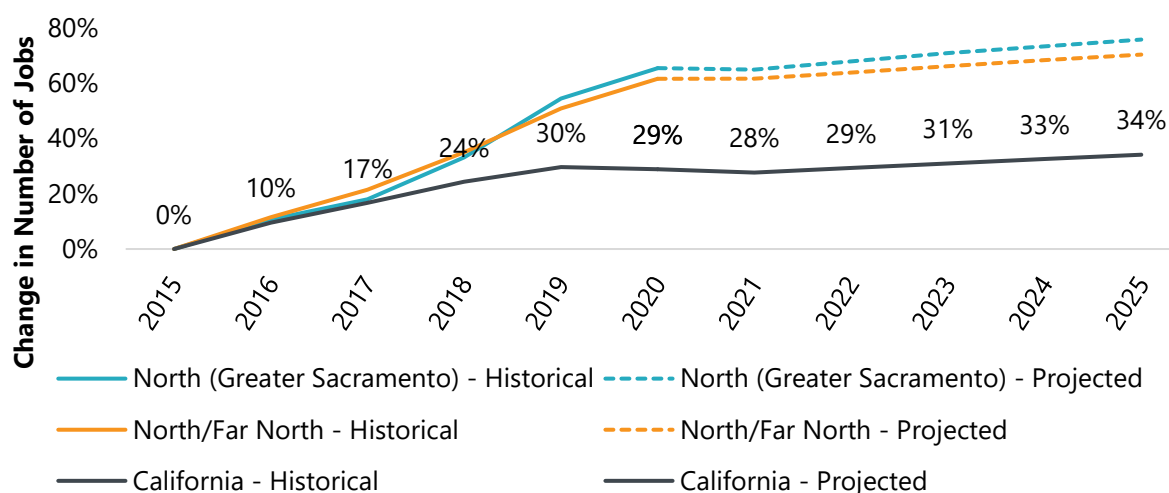
Exhibit 1 summarizes the five-year projected job growth for middle-skill and high-skill occupations in the North, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	2020-2025 Annual Openings
Emergency Medical Technicians and Paramedics	1,848	1,964	116	6%	157
North (Greater Sacramento)	1,848	1,964	116	6%	157
Emergency Medical Technicians and Paramedics	2,547	2,685	138	5%	214
North/Far North	2,547	2,685	138	5%	214
Emergency Medical Technicians and Paramedics	24,246	25,233	986	4%	2,004
California	24,246	25,233	986	4%	2,004

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.

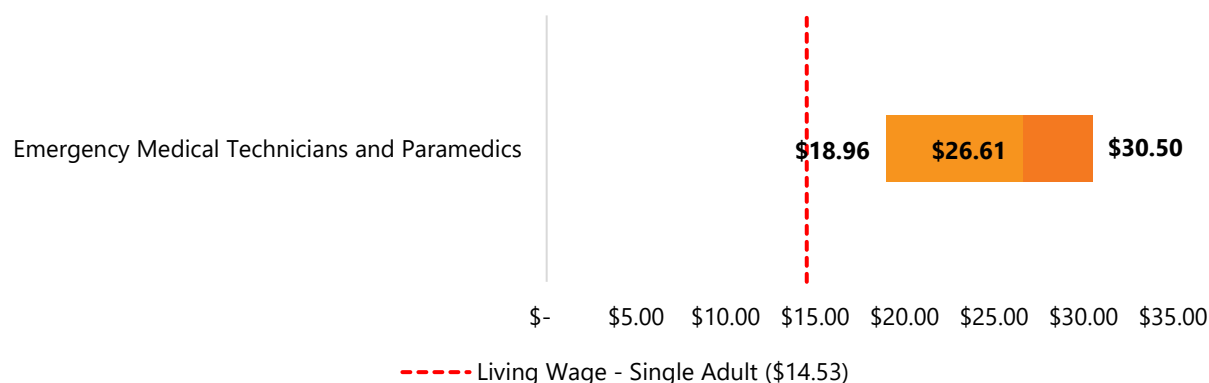
Exhibit 2. Changes in employment, 2015-2025



WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupations to the North (Greater Sacramento) living wage for a single adult - \$14.53 per hour.¹

Exhibit 3. Comparison of wages by occupation, 2020



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 COE identified 223 online job postings for the selected occupations in the Greater Sacramento subregion. Job postings data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from March 1, 2021, to February 28, 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
Emergency Medical Technicians and Paramedics	223	100%
Total Job Postings	223	100%

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.

Exhibit 5 shows the top 10 job titles with the most job postings and the share. All job postings included a job title.

Exhibit 5. Top jobs titles

Job Title	Job Postings	Share of Job Postings
Emergency Medical Technician	34	15%
Paramedic	32	14%
EMT	19	9%
Emergency Medical Technician EMT	13	6%
Emergency Medicine	5	2%
Emergency Room	4	2%
Emergency Medical Technician /	3	1%
Entry Ski Patrol EMT	3	1%
Paramedic Basic In	3	1%
Senior Ed Technician	3	1%

Employers

Exhibit 6 shows the top 10 employers with the most job postings for the selected occupations. Eleven percent (n = 25) of job postings did not include an employer.

Exhibit 6. Employers with the most job postings

Employer	Job Postings	Share of Job Postings
Global Medical Response	12	5%
Covid Clinic	12	5%
Dignity Health	10	4%
Norcal Ambulance	8	4%
Pro Transport	7	3%

Employer	Job Postings	Share of Job Postings
Sacramento Valley Ambulance	6	3%
Medic Ambulance Service Incorporated	6	3%
Vail Resorts Management Company	5	2%
America West Medical Transport	5	2%
Global Medical Response, Inc.	4	2%

Certifications, Skills, and Experience

Exhibit 7 shows the most relevant certifications requested by employers for the selected occupations. Nine percent (n = 19) of job postings did not include certification information.

Exhibit 7. Most in-demand certifications

Certification	Job Postings	Share of Job Postings
Emergency Medical Technician (EMT)	173	78%
Driver's License	114	51%
Basic Life Saving (BLS)	85	38%
Basic Cardiac Life Support Certification	56	25%
Paramedic Certification	50	22%
Advanced Cardiac Life Support (ACLS) Certification	45	20%

Exhibit 8 shows the top 10 skills across three categories for the studied occupations: specialized, human-centered, and technical skills.

Exhibit 8. Most in-demand specialized skills

Top 10 Specialized Skills	Top 10 Human-Centered Skills	Top 10 Technical Skills
Cardiopulmonary Resuscitation (CPR)	Physical Abilities	Microsoft Word

Top 10 Specialized Skills	Top 10 Human-Centered Skills	Top 10 Technical Skills
Patient Care	Communication Skills	Microsoft Excel
Advanced Cardiac Life Support (ACLS)	Teamwork / Collaboration	Microsoft Office
Life Support	Critical Thinking	YouTube
Cleaning	Organizational Skills	Computer-Aided Dispatch (CAD)
Medical Triage	Multi-Tasking	Meditech
Critical Care	Written Communication	Microsoft PowerPoint
Trauma	Building Effective Relationships	Voice over IP (VoIP)
Customer Service	Prioritizing Tasks	--
Hepatitis B	Writing	--

Exhibit 9 shows employers' minimum level of education for job postings for the selected occupations. Fifty-eight percent (n = 130) of job postings did not include a preferred education level.

Exhibit 9. Employer-preferred minimum education levels

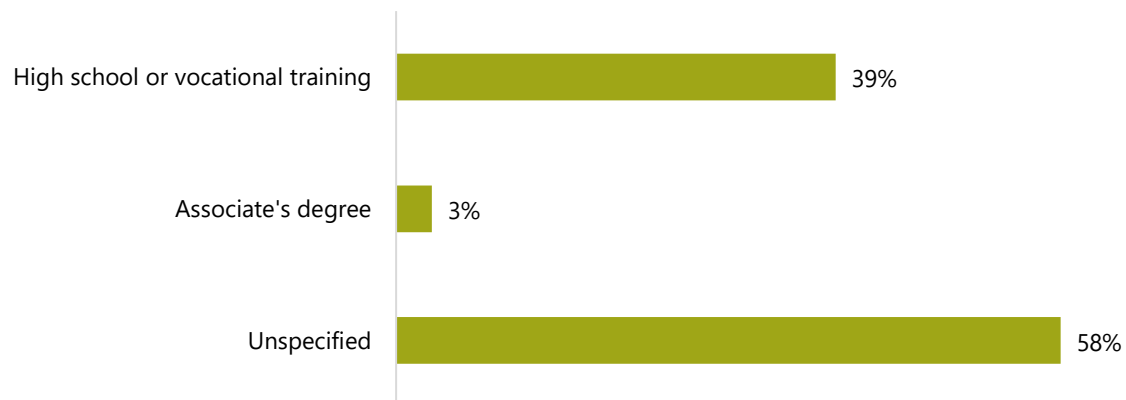
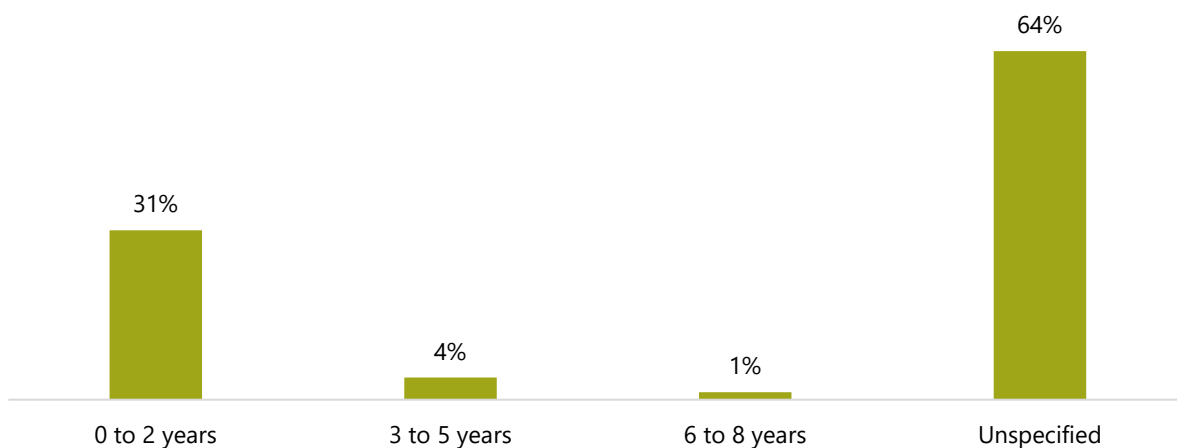


Exhibit 10 shows the experience levels required by employers for job postings for the selected occupations. Sixty-four percent (n = 142) of job postings did not include a preferred experience level.

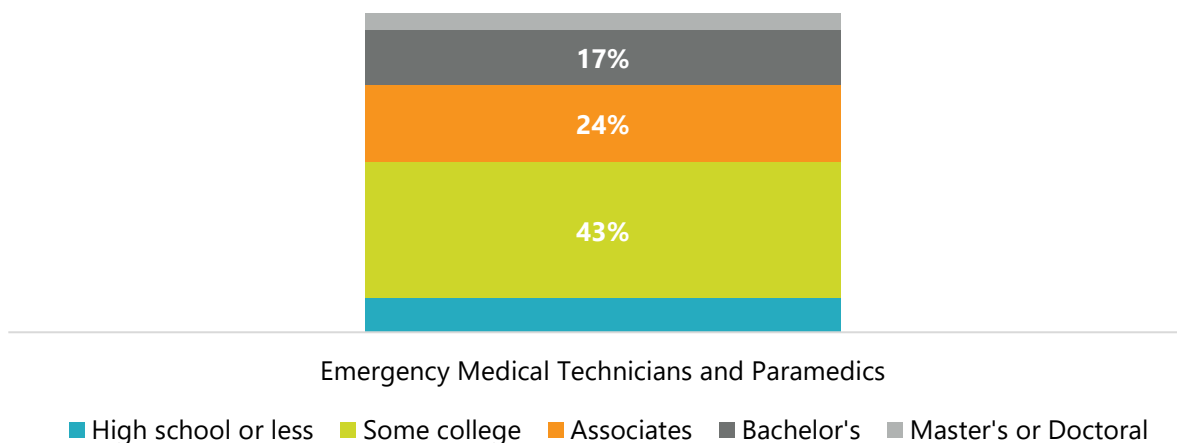
Exhibit 10. Employer-preferred experience levels



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
Emergency Medical Technicians and Paramedics	Postsecondary nondegree award	None	None

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
Emergency Medical Services (1250.00)	Emergency Medical Technology/Technician (EMT Paramedic) (51.0904)

Community College Supply

Exhibits 14 and 15 compare the average number of certificates and degrees conferred in selected community college programs over the last three academic years.

Exhibit 14. 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
Emergency Medical Services (1250.00)	American River	24	16	22	21
	Cosumnes River	1	2	1	1

Program - TOP Code	College	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Yr Annual Awards Average
	Sierra	0	12	24	12
	Yuba	0	0	5	2
	Grand Total	25	30	52	36

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

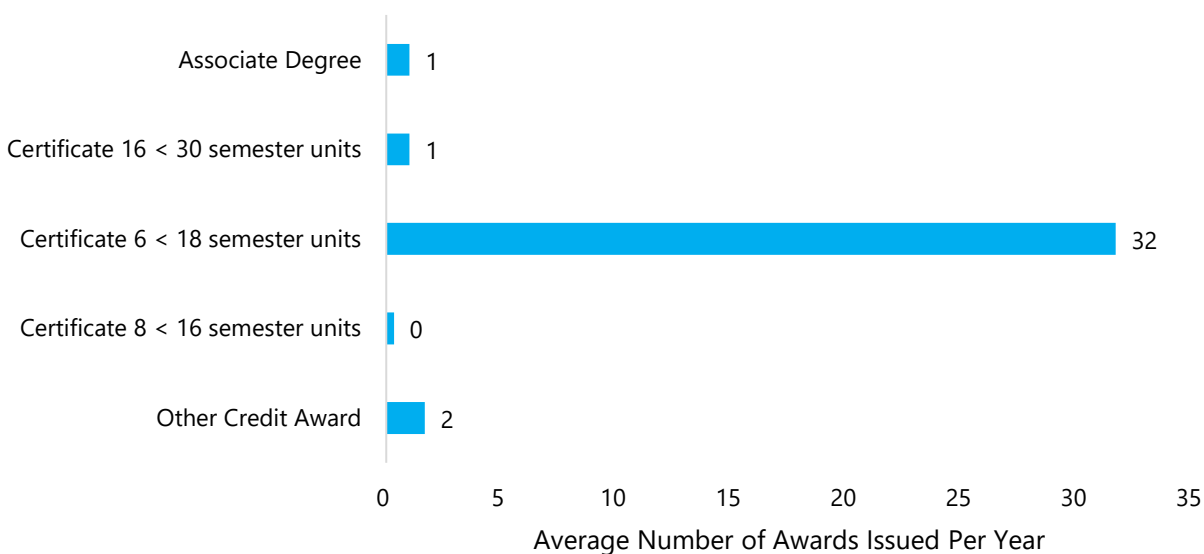


Exhibit 16. North (Greater Sacramento) Community College Emergency Medical Services Programs

College	Program Title	Award Offered
Cosumnes River	Emergency Medical Technician	Certificate
Folsom Lake	Emergency Medical Studies	Certificate
Sierra	Emergency Medical Sciences	A.S. Degree Certificate

Other Postsecondary Supply

Exhibit 17 compares the average number of degrees non-community college training providers confer in the North (Greater Sacramento) subregion over the last three academic years. Please note that non-community college data lags by one year.

Most of this data comes from [California's Bureau for Private Postsecondary Education](#) (BPPE). In California, private postsecondary educational institutions must submit an annual report to the BPPE. The reports must include graduation rates, which are shared below (if readily available). This data is used to estimate postsecondary supply from non-community college training providers.

Exhibit 17. Number of graduates by program, 2017-18 through 2019-20

Program - CIP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
Emergency Medical Technology/Technician (EMT Paramedic) (51.0904)	CSU Sacramento	29	--	--	--
	NCTI Roseville (both EMT and EMT-P training)	115	139	--	--
	Grand Total	158	139	--	--

FINDINGS

- This report focuses on one occupation in the EMT training pathway: emergency medical technicians and paramedics.
- The North (Greater Sacramento) subregion held 1,848 emergency medical technician and paramedic jobs in 2020. These jobs are projected to increase by 6% over the next five years, adding 116 new jobs to the subregion by 2025.
 - Jobs for emergency medical technicians and paramedics are projected to grow faster in the North (Greater Sacramento) subregion than California.
- Over the next five years, emergency medical technicians and paramedics are projected to have 157 annual openings in the North (Greater Sacramento) subregion.
- Wage data shows that emergency medical technicians and paramedics earn nearly \$5 above the subregion's living wage of \$14.53 per hour.
- According to real-time labor market information, there were about 223 online job postings for emergency medical technicians and paramedics between March 1, 2021, and December 31, 2021.
- Sixty-seven percent of incumbent emergency medical technicians and paramedics have educational attainment levels consistent with community college offerings (some college or associate degrees).
- Four North (Greater Sacramento) community colleges offer degrees and certificates in EMT training programs. Together, these programs conferred an average of 36 awards (certificates and associate degrees) in EMT training programs over the last three academic years (2018-19 through 2020-21).
 - However, no North community college offers training for paramedics; all training programs are focused on emergency medical technicians.
- Both CSU Sacramento's College of Continuing Education and NCTI Roseville offer EMT and paramedic training programs. Recent awards data was not readily available.

RECOMMENDATIONS

- Based on a three-year average of annual awards in North (Greater Sacramento) subregion emergency medical training programs and projected yearly openings, the supply gap analysis shows that the region seems to have room for additional training.
 - Together, community colleges and other postsecondary training providers issued an average of 36 awards over the last three years.
 - There are 157 projected annual openings for emergency medical technicians and paramedics.
- The North (Greater Sacramento) Center of Excellence recommends moving forward with the program.
- The North (Greater Sacramento) Center of Excellence also recommends that community colleges explore creating a paramedic training pathway.

COE Recommendation		
Move forward with the program	Proceed with caution	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.

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.

<http://www.burning-glass.com>.

Labor Market Information Division. California Employment Development Department.

<https://labormarketinfo.edd.ca.gov/>.

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

Occupational Employment Statistics (OES). Bureau of Labor Statistics.

<https://www.bls.gov/oes/home.htm>.

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. November 2015 Edition. <http://coeccc.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.

© 2021 California Community Colleges Chancellor's Office,
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, Research
Manager

North (Greater Sacramento)
Center of Excellence

Ebony.Benzing@losrios.edu