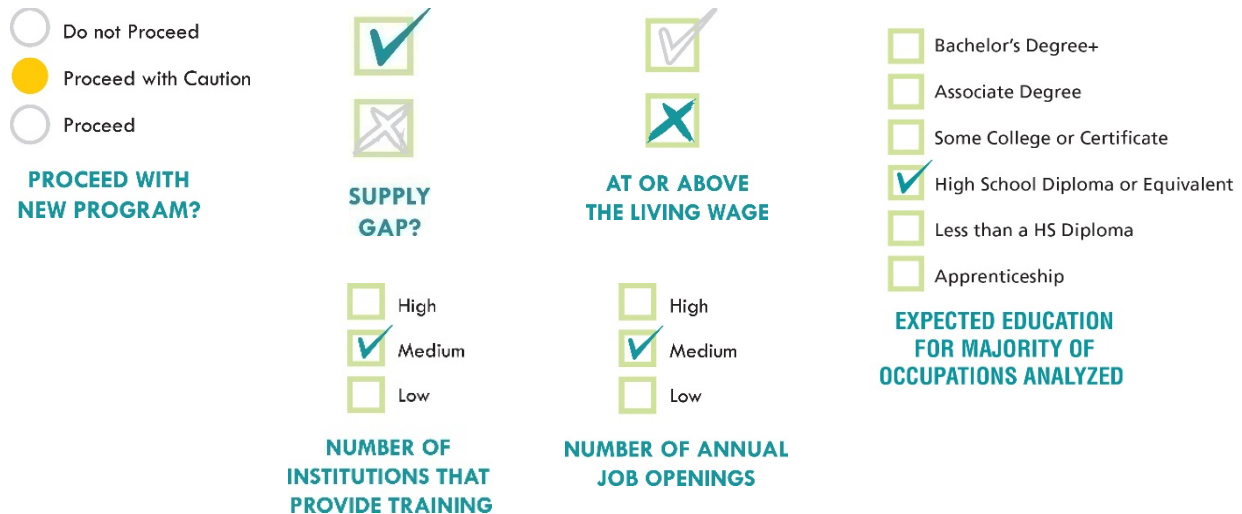


Screen Printer Occupations

Labor Market Analysis: San Diego County

January 2021

Summary



The brief provides labor market information about *Screen Printer Occupations* to assist the San Diego and Imperial Counties Community Colleges with program development and strategic planning. *Screen Printer Occupations* include “Helpers--Production Workers” and “Prepress Technicians and Workers.” According to available labor market information, *Screen Printer Occupations* in San Diego County have a labor market demand of 347 annual job openings (while average demand for a single occupation in San Diego County is 277 annual job openings), and five educational institutions in San Diego County supply 55 awards for these occupations, suggesting that there is a supply gap in the labor market. Entry-level wages are below the living wage for all occupations and median wages for “Prepress Technicians and Workers” are above the living wage. This brief recommends proceeding with caution when developing a **new** program because 1) these occupations’ entry-level earnings are below the living wage and 2) the percentage of students who earn a living wage is lower than students who complete Career Education programs in general.

Introduction

This report provides labor market information in San Diego County for the following occupational codes in the Standard Occupational Classification (SOC)¹ system:

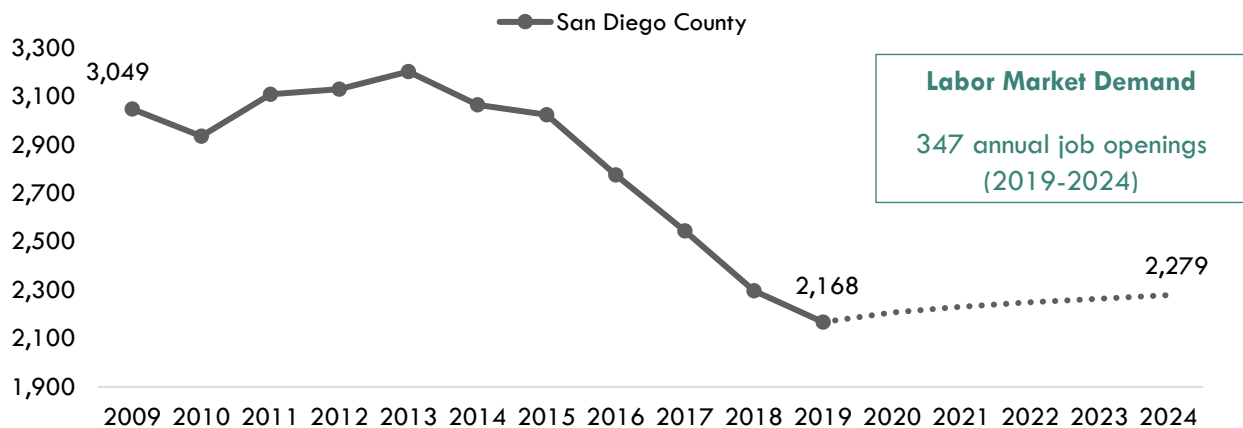
- **Prepress Technicians and Workers (SOC 51-5111):** Format and proof text and images submitted by designers and clients into finished pages that can be printed. Includes digital and photo typesetting. May produce printing plates.
- **Helpers--Production Workers (SOC 51-9198):** Help production workers by performing duties requiring less skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment.

For the purpose of this report, these occupations are referred to as *Screen Printer Occupations*.

Projected Occupational Demand

Between 2019 and 2024, *Screen Printer Occupations* are projected to increase by 111 net jobs or five percent (Exhibit 1a). During this period, employers in San Diego County are projected to hire 347 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

Exhibit 1a: Number of Jobs for Screen Printer Occupations (2009-2024)²



¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc).

² EMSI 2020.04; QCEW, Non-QCEW, Self-Employed.

Exhibit 1b breaks down the projected number of annual job openings by occupation more specifically: *Helpers--Production Workers and Technicians* are projected to have the most labor market demand between 2019 and 2024, with 324 annual job openings.

Exhibit 1b: Number of Jobs for Screen Printer Occupations in San Diego County (2019-2024)³

Occupational Title	2019 Jobs	2024 Jobs	2019 - 2024 Net Jobs Change	2019- 2024 % Net Jobs Change	Annual Job Openings (Demand)
Helpers--Production Workers	1,973	2,101	128	6%	324
Prepress Technicians and Workers	195	178	-17	-9%	23
Total	2,168	2,279	111	5%	347

Earnings

Entry-level hourly earnings for *Screen Printer Occupations* range from \$12.72 to \$13.65 (Exhibit 2a).

Exhibit 2a: Hourly Earnings for Screen Printer Occupations in San Diego County⁴

Occupational Title	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Prepress Technicians and Workers	\$13.65	\$20.11	\$24.64
Helpers--Production Workers	\$12.72	\$14.50	\$16.93

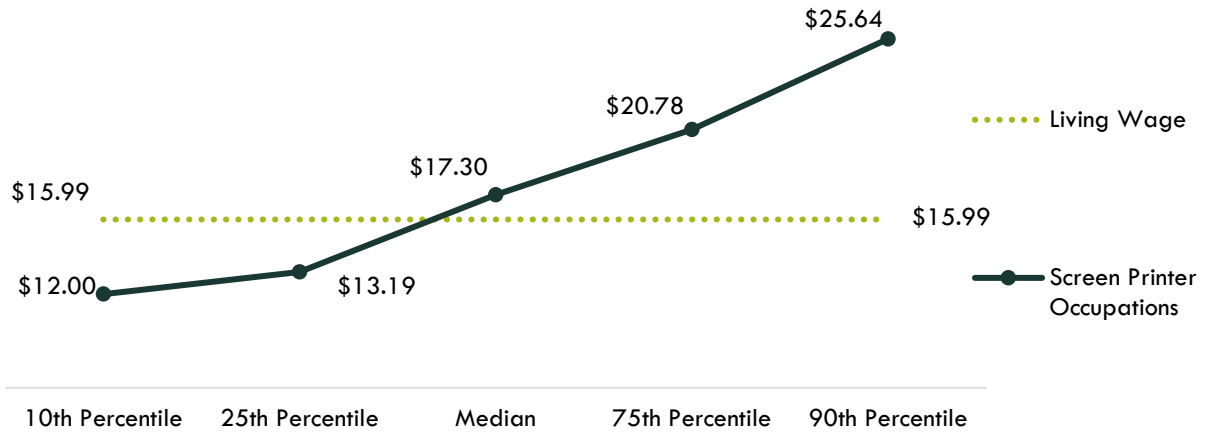
On average, entry-level hourly earnings for *Screen Printer Occupations* are \$13.19; this is less than the living wage for a single adult in San Diego County, which is \$15.99 per hour (Exhibit 2b).⁵

³ EMSI 2020.04; QCEW, Non-QCEW, Self-Employed

⁴ EMSI 2020.04; QCEW, Non-QCEW, Self-Employed

⁵ "California Family Needs Calculator (formerly the Self-Sufficiency Standard)," Insight: Center for Community Economic Development, last updated 2018. insightccd.org/2018-self-sufficiency-standard.

Exhibit 2b: Average Hourly Earnings⁶ for Screen Printer Occupations in San Diego County⁷



Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.⁸ There are **three** TOP codes and **eight** CIP codes related to *Screen Printer Occupations* (Exhibit 3).

Exhibit 3: Related TOP and CIP Codes for Screen Printer Occupations

Screen Printer Occupations
TOP 0614.00: Digital Media
TOP 0614.50: Desktop Publishing
TOP 0936.00: Printing and Lithography
CIP 09.0702: Digital Communication and Media/Multimedia
CIP 10.0303: Prepress/Desktop Publishing and Digital Imaging Design
CIP 10.0305: Graphic and Printing Equipment Operator, General Production
CIP 10.0306: Platemaker/Imager
CIP 10.0307: Printing Press Operator
CIP 10.0308: Computer Typography and Composition Equipment Operator
CIP 50.0102: Digital Arts
CIP 50.0401: Design and Visual Communications, General

⁶ 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.

⁷ EMSI 2020.04; QCEW, Non-QCEW, Self-Employed.

⁸ TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).

According to TOP data, **three** community colleges supply the region with awards for this occupation: **MiraCosta College, Palomar and San Diego City College**. According to CIP data, **two** non-community-college institutions supply the region with awards, **National University and Platt College-San Diego** (Exhibit 4).

**Exhibit 4: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions
(Program Year 2014-15 through PY2018-19 Average)**

TOP6 or CIP	TOP6 or CIP Title	3-Yr Annual Average CC Awards (PY15-16 to PY17-18)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY17-18)
0614.00	Digital Media	33	0	33
	• MiraCosta	12	0	
	• Palomar	16	0	
	• San Diego City	5	0	
0614.50	Desktop Publishing	8	0	8
	• Palomar	8	0	
0936.00	Printing and Lithography	1	0	1
	• Palomar	1	0	
09.0702	Digital Communication and Media/Multimedia	0	13	13
	• National University	0	8	
	• Platt College-San Diego	0	5	
10.0303	Prepress/Desktop Publishing and Digital Imaging Design	0	0	0
	• Platt College-San Diego	0	0	
			Total	55

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply⁹ suggests that there is a **supply gap** for these occupations in San Diego County, with **347** annual openings and **55** awards. Comparatively, there are **4,722** annual openings in California and **301** awards, suggesting that there is also a supply gap across the state¹⁰ (Exhibit 5).

Exhibit 5: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
San Diego	347	55	292
California	4,722	301	4,421

Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

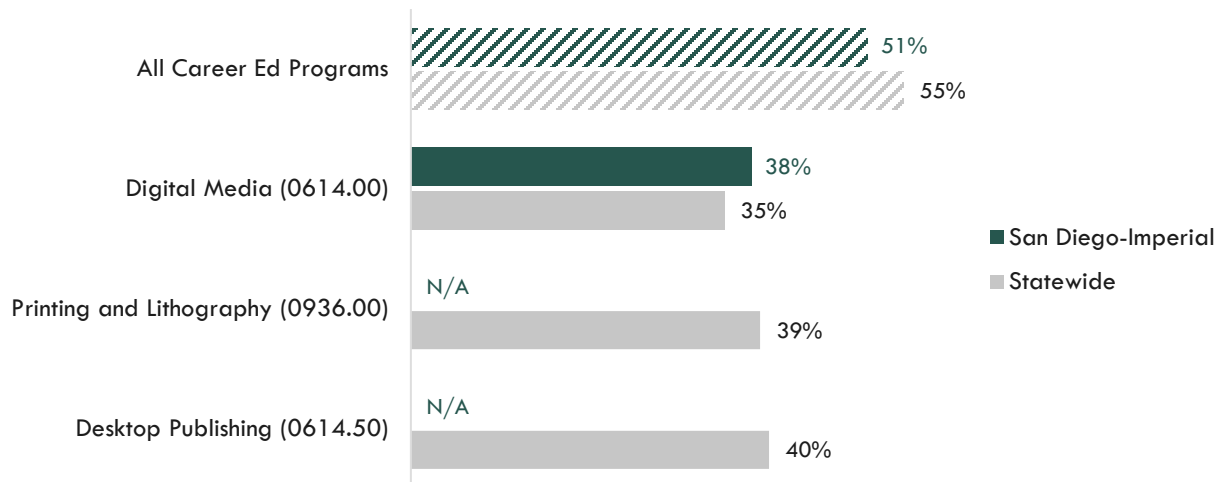
⁹ Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

¹⁰ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/Supply-and-Demand.aspx.

Student Outcomes and Regional Comparisons

According to the California Community Colleges LaunchBoard, 38 percent of students in the San Diego-Imperial region earned a living wage after completing a program related to *Screen Printer Occupations*, compared to 35 to 40 percent statewide and 55 percent of students in Career Education programs in general across the state (Exhibit 6a).

Exhibit 6a: Proportion of Students Who Earned a Living Wage, PY2017-18¹¹

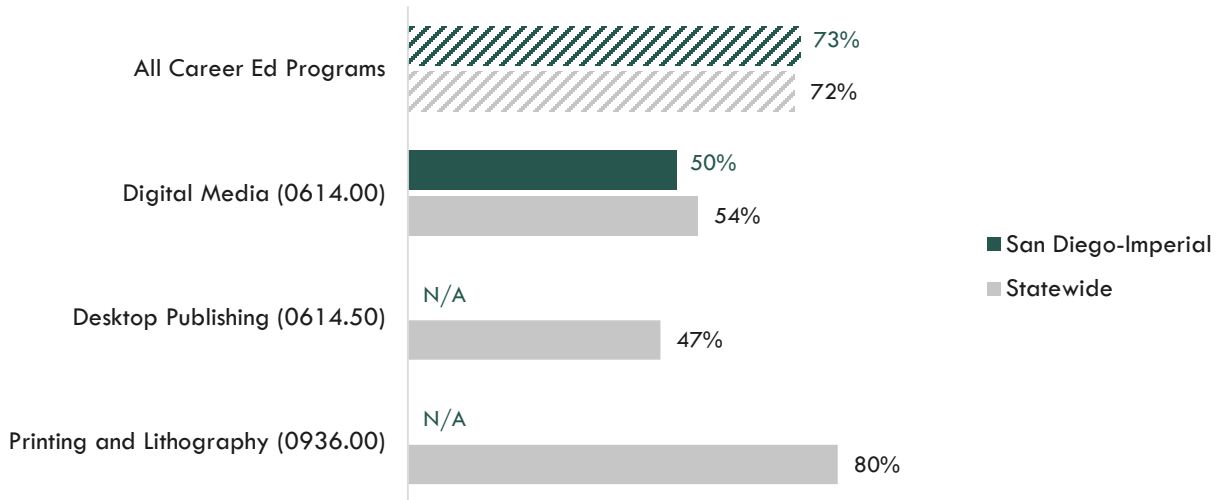


"N/A" indicates insufficient data

¹¹ Among completers and skills builders who exited, the proportion of students who attained a living wage.

According to the California Community Colleges LaunchBoard, 50 percent of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a related program, compared to 47 to 80 percent statewide and 72 percent of students in Career Education programs in general across the state (Exhibit 6b).

Exhibit 6b: Percentage of Students in a Job Closely Related to Field of Study, PY2016-17¹²



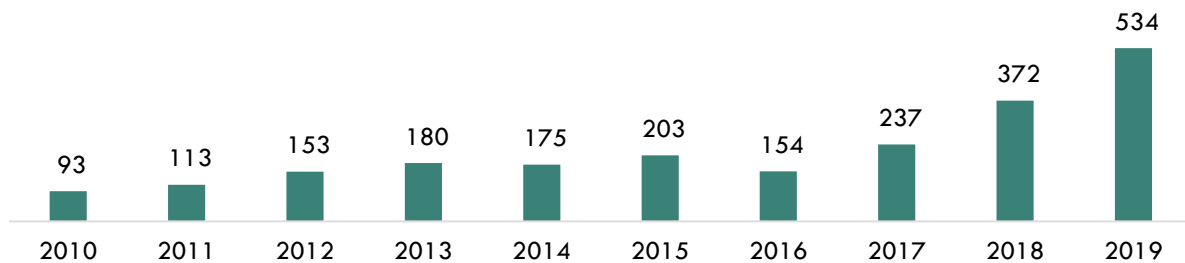
"N/A" indicates insufficient data

¹² Most recent year with available data is Program Year 2016-17. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

Online Job Postings

This report analyzes not only historical and projected data (traditional labor market information or LMI), but also recent data from online job postings (real-time LMI). Online job postings may provide additional insight about recent changes in the labor market that are not captured by historical data. Between 2010 and 2019, there was an average of 221 online job postings per year in San Diego County for Screen Printer Occupations (Exhibit 7). Please note that online job postings do not equal labor market demand; demand is represented by annual job openings (see Exhibit 1b above). Employers may post a position multiple times for various reasons, such as increasing the pool of applicants, for example.

Exhibit 7: Number of Online Job Postings for Screen Printer Occupations in San Diego County (2010-2019)¹³



Top Employers

Between January 1, 2017 and December 31, 2019, the top five employers in San Diego County for these occupations were TE Connectivity, General Dynamics, Sherwin Williams, Mission Linen, and Unifirst Corporation (Exhibit 8).

Exhibit 8: Top Employers in San Diego County for Screen Printer Occupations¹⁴

Top Employers	
• Mission Linen	• CoorsTek Inc.
• TE Connectivity	• Awesome Doughnut, LLC
• General Dynamics	• Crossmark
• Sherwin Williams	• pSemi
• UniFirst Corporation	• Airgas Inc.

¹³ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2019.

¹⁴ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2017-2019.

Education, Skills and Certifications

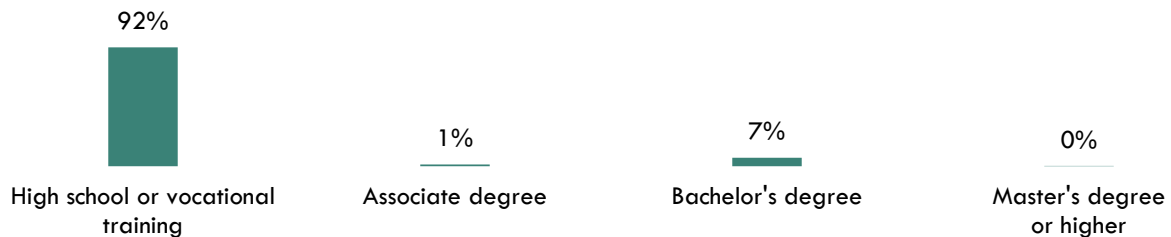
Screen Printer Occupations have a national educational attainment ranging from a [high school diploma or equivalent](#) to a [postsecondary non-degree award](#) (Exhibit 9a).

Exhibit 9a: National Educational Attainment for Screen Printer Occupations ¹⁵

Occupational Title	Typical Entry-Level Education
Prepress Technicians and Workers	Postsecondary non-degree award
Helpers--Production Workers	High school diploma or equivalent

Based on online job postings between January 1, 2017 and December 31, 2019 in San Diego County, the top listed educational requirement for Screen Printer Occupations is a [high school or vocational training](#) (Exhibit 9b).¹⁶

Exhibit 9b: Educational Requirements for Screen Printer Occupations in San Diego County¹⁷



*May not add to 100% due to rounding

¹⁵ EMSI 2020.04; QCEW, Non-QCEW, Self-Employed.

¹⁶ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2017-2019.

¹⁷ "Educational Attainment for Workers 25 Years and Older by Detailed Occupation," Bureau of Labor Statistics, last modified September 4, 2019. bls.gov/emp/tables/educational-attainment.htm.

Exhibit 10 lists the top specialized, soft and software skills that appeared in online job postings between January 1, 2017 and December 31, 2019.

Exhibit 10: Top Skills for Screen Printer Occupations in San Diego County¹⁸

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Machine Operation • Machinery • Packaging • Lifting Ability • Cleaning • Repair • Basic Mathematics • Forklift Operation • Hand Tools • Scheduling • Quality Assurance and Control • Welding • Manual Dexterity • Data Entry • Customer Service 	<ul style="list-style-type: none"> • Physical Abilities • Detail-Oriented • Communication Skills • English • Organizational Skills • Teamwork / Collaboration • Writing • Work Area Maintenance • Troubleshooting • Multi-Tasking • Preventive Maintenance • Computer Literacy • Written Communication • Planning • Bilingual 	<ul style="list-style-type: none"> • Microsoft Excel • Microsoft Word • Microsoft PowerPoint • Enterprise Resource Planning (ERP) • Adobe Acrobat • Adobe InDesign • Adobe Photoshop • Microsoft Access • Microsoft Visio • SQL • Adobe Illustrator • Microsoft Project • Adobe Creative Suite • Debugging • SAP

¹⁸ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2017-2019.

Exhibit 11 lists the top certifications that appeared in online job postings between January 1, 2017 and December 31, 2019.

Exhibit 11: Top 15 Certifications for Screen Printer Occupations in San Diego County¹⁹

Top Certifications in Online Job Postings

1. OSHA Forklift Certification
 2. Security Clearance
 3. IPC Certification
 4. Casino Gaming License
 5. CompTIA Security+
 6. Welding Certification
 7. ServSafe
 8. Project Management Certification
 9. Production Certificate
 10. Linux Professional Institute Certification
 11. Lean Six Sigma Certification
 12. Certified Rehabilitation Counselor
 13. Certified Public Accountant (CPA)
 14. Biotechnology Certificate
 15. Associate in Risk Management
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¹⁹ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2017-2019.

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Important Disclaimers

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. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

This workforce demand report uses state and federal job projection data that was 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.