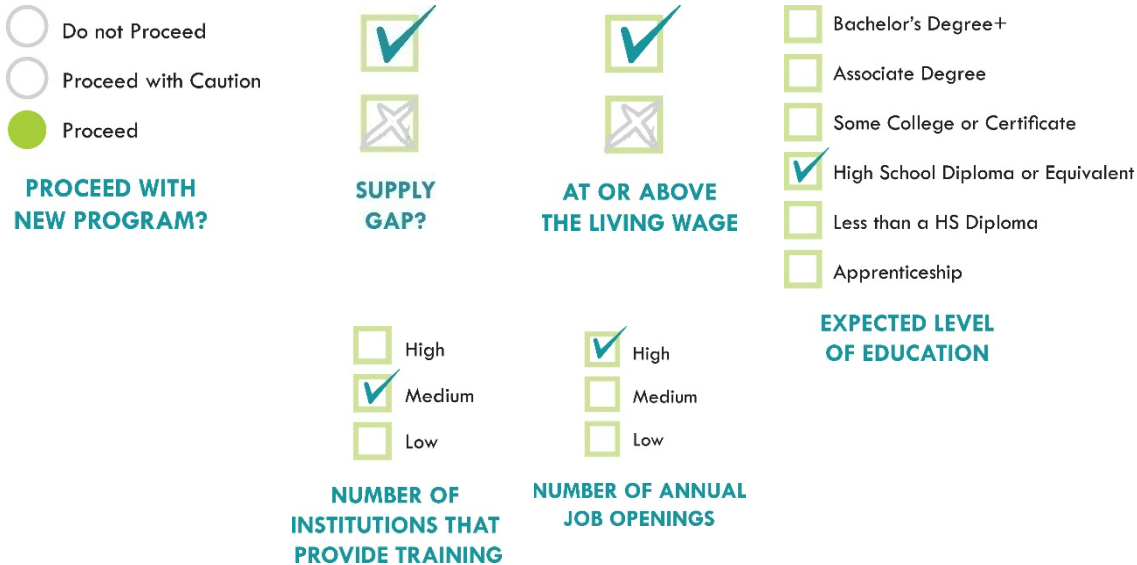


# Inspectors, Testers, Sorters, Samplers, and Weighers

Labor Market Analysis: San Diego County

March 2021

## Summary



The San Diego-Imperial Center of Excellence for Labor Market Research (COE) developed this brief to assist the region's community colleges with strategic planning and program development. According to available labor market information, *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County have a labor market demand of 670 annual job openings (while average demand for a single occupation in San Diego County is 277 annual job openings), and seven educational institutions in San Diego County supply 132 awards for this occupation, suggesting that there is a supply gap in the labor market. Entry-level wages and median wages for this occupation are above the living wage. This brief recommends proceeding with a new program because 1) entry-level and median earnings are above the living wage; 2) a high number of annual openings exist; and 3) a supply gap exists for this occupation.

## Introduction

This report provides labor market information in San Diego County for the following occupational code in the Standard Occupational Classification (SOC)<sup>1</sup> system:

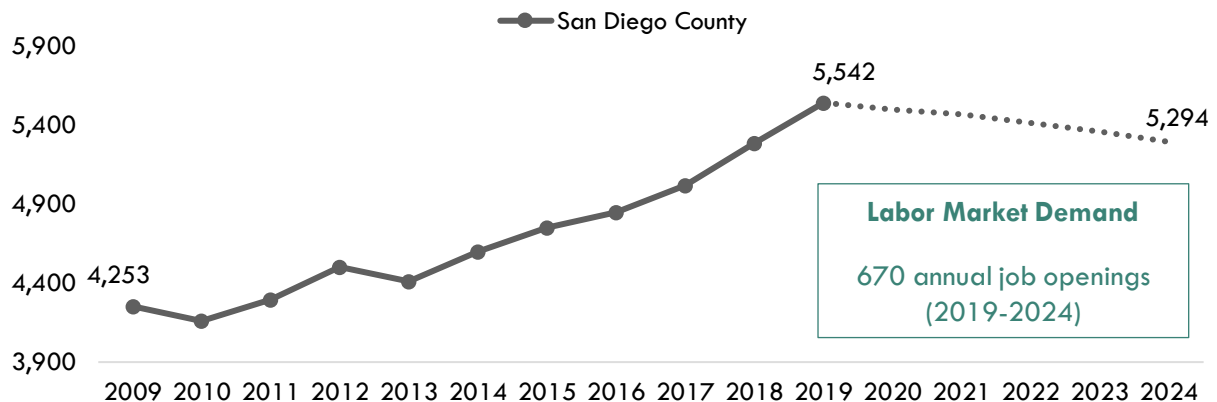
**Inspectors, Testers, Sorters, Samplers, and Weighers (SOC 51-9061):** Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment. Sample reported job titles include:

- Quality Control Inspector
- Quality Inspector
- Quality Control Technician
- Quality Assurance Inspector
- Test Technician
- Quality Technician
- Process Checker
- Surveillance Inspector

## Projected Occupational Demand

Between 2019 and 2024, *Inspectors, Testers, Sorters, Samplers, and Weighers* are projected to decrease by 248 net jobs or four percent (Exhibit 1). Employers in San Diego County will need to hire 670 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

**Exhibit 1: Number of Jobs for *Inspectors, Testers, Sorters, Samplers, and Weighers* (2009-2024)<sup>2</sup>**



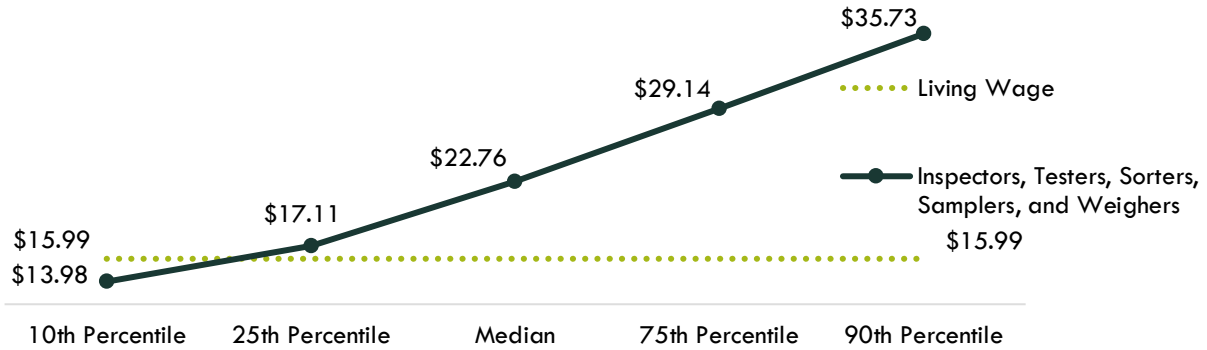
<sup>1</sup> The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc).

<sup>2</sup> Emsi 2020.04; QCEW, Non-QCEW, Self-Employed.

## Earnings

*Inspectors, Testers, Sorters, Samplers, and Weighers* receive entry-level hourly earnings of **\$17.11**; this is more than the living wage for a single adult in San Diego County, which is **\$15.99** per hour (Exhibit 2).<sup>3</sup>

**Exhibit 2: Hourly Earnings<sup>4</sup> for *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County<sup>5</sup>**



## 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.<sup>6</sup> There are **four** TOP codes and **12** CIP codes related to *Inspectors, Testers, Sorters, Samplers, and Weighers* (Exhibit 3).

**Exhibit 3: Related TOP and CIP Codes for *Inspectors, Testers, Sorters, Samplers, and Weighers***

### *Inspectors, Testers, Sorters, Samplers, and Weighers*

TOP 0430.00: Biotechnology and Biomedical Technology

TOP 0955.00: Laboratory Science Technology

TOP 0956.00: Manufacturing and Industrial Technology

TOP 0956.80: Industrial Quality Control

CIP 15.0401: Biomedical Technology/Technician

CIP 15.0405: Robotics Technology/Technician

CIP 15.0406: Automation Engineer Technology/Technician

<sup>3</sup> "California Family Needs Calculator (formerly the Self-Sufficiency Standard)," Insight: Center for Community Economic Development, last updated 2018. [insightccd.org/2018-self-sufficiency-standard](https://insightccd.org/2018-self-sufficiency-standard).

<sup>4</sup> 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.

<sup>5</sup> Emsi 2020.04; QCEW, Non-QCEW, Self-Employed.

<sup>6</sup> TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart ([datamart.cccco.edu](https://datamart.cccco.edu)) and CIP data comes from the Integrated Postsecondary Education Data System ([nces.ed.gov/ipeds/use-the-data](https://nces.ed.gov/ipeds/use-the-data)).

*Inspectors, Testers, Sorters, Samplers, and Weighers*

- CIP 15.0611: Metallurgical Technology/Technician

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- CIP 15.0613: Manufacturing Engineering Technology/Technician

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- CIP 15.0702: Quality Control Technology/Technician

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- CIP 15.0803: Automotive Engineering Technology/Technician

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- CIP 15.0805: Mechanical Engineering/Mechanical Technology/Technician

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- CIP 26.1104: Computational Biology

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- CIP 41.0101: Biology Technician/Biotechnology Laboratory Technician

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- CIP 41.0301: Chemical Technology/Technician

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- CIP 50.0404: Industrial and Product Design

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According to TOP data, six community colleges supply the region with awards for this occupation: [MiraCosta College](#), [San Diego Continuing Education](#), [San Diego City College](#), [San Diego Mesa College](#), [San Diego Miramar College](#), and [Southwestern College](#). According to CIP data, one non-community-college institution supplies the region with awards, [Newschool of Architecture and Design](#) (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 (PY16-17 to PY18-19)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY18-19)
0430.00	Biotechnology and Biomedical Technology	117	0	117
	<ul style="list-style-type: none"> <li>• MiraCosta</li> </ul>	59	0	
	<ul style="list-style-type: none"> <li>• San Diego City</li> </ul>	0	0	
	<ul style="list-style-type: none"> <li>• San Diego Mesa</li> </ul>	1	0	
	<ul style="list-style-type: none"> <li>• San Diego Miramar</li> </ul>	48	0	
	<ul style="list-style-type: none"> <li>• Southwestern</li> </ul>	9	0	
0956.00	Manufacturing and Industrial Technology	14	0	14
	<ul style="list-style-type: none"> <li>• San Diego City</li> </ul>	14	0	
	<ul style="list-style-type: none"> <li>• San Diego Cont Ed</li> </ul>	0	0	

TOP6 or CIP	TOP6 or CIP Title	3-Yr Annual Average CC Awards (PY16-17 to PY18-19)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY18-19)
50.0404	Industrial and Product Design	0	1	1
	<ul style="list-style-type: none"> <li>Newschool of Architecture and Design</li> </ul>	0	1	
			Total	132

## Demand vs. Supply

Comparing labor demand (annual openings) with labor supply<sup>7</sup> suggests that there is a **supply gap** for this occupation in San Diego County, with **670** annual openings and **132** awards. Comparatively, there are **7,418** annual openings in California and **1,104** awards, suggesting that there is also a supply gap across the state<sup>8</sup> (Exhibit 5).

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

Community Colleges and Other Postsecondary Educational Institutions	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
San Diego	670	132	538
California	7,418	1,104	6,314

**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.

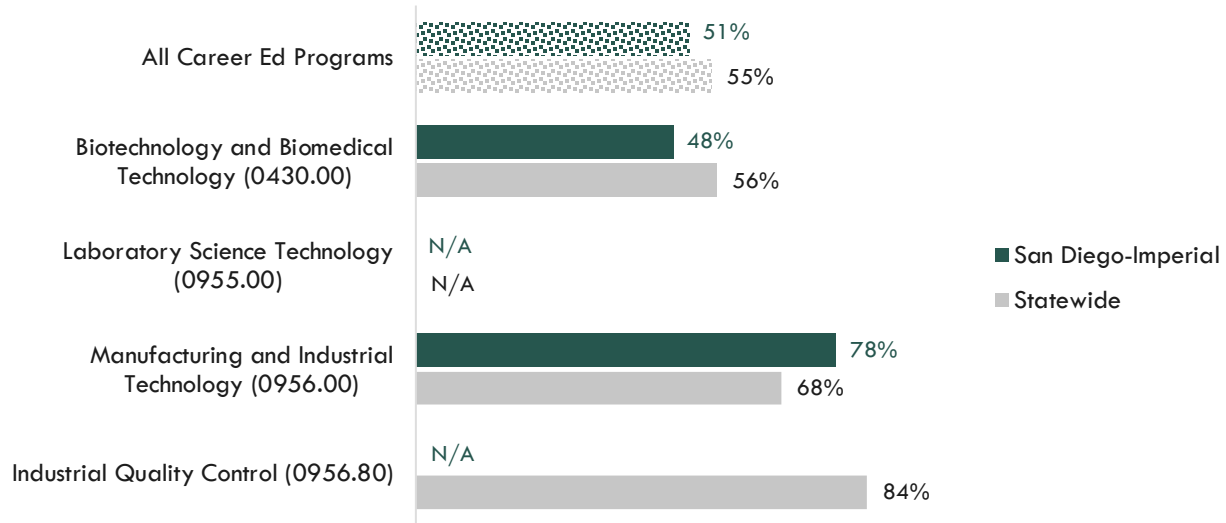
<sup>7</sup> Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

<sup>8</sup> "Supply and Demand," Centers of Excellence Student Outcomes, [coecc.net/Supply-and-Demand.aspx](http://coecc.net/Supply-and-Demand.aspx).

## Student Outcomes and Regional Comparisons

According to the California Community Colleges LaunchBoard, 48 to 78 percent of students in the San Diego-Imperial region earned a living wage after completing a program related to *Inspectors, Testers, Sorters, Samplers, and Weighers*, compared to 56 to 84 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, PY2017-18<sup>9</sup>**

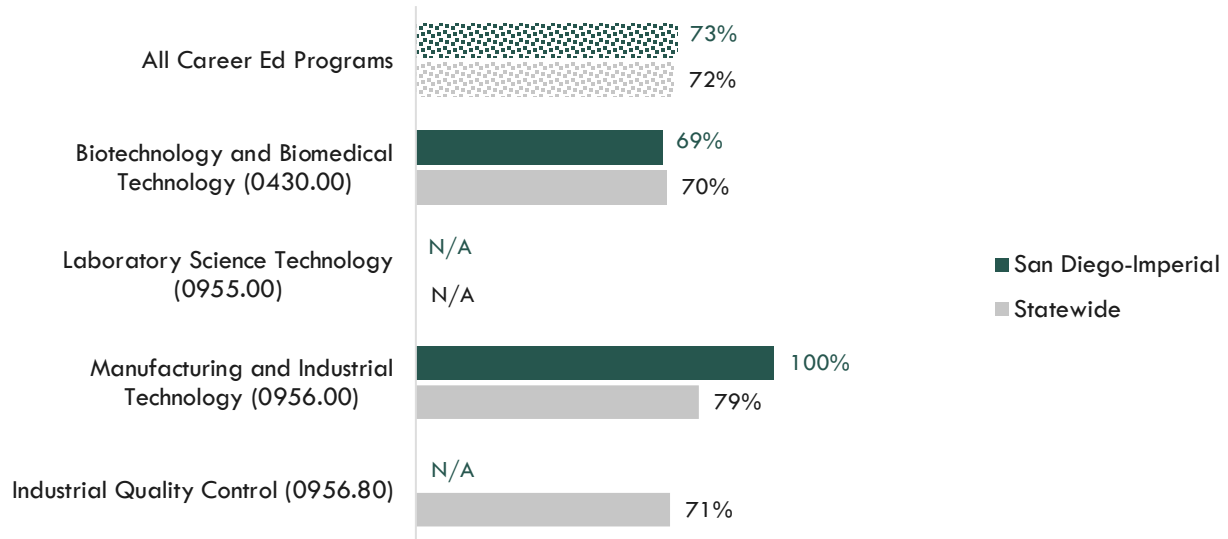


"N/A" indicates insufficient data

<sup>9</sup> Among completers and skills builders who exited, the proportion of students who attained a living wage.

According to the California Community Colleges LaunchBoard, 69 to 100 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 70 to 79 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, PY2016-17<sup>10</sup>**



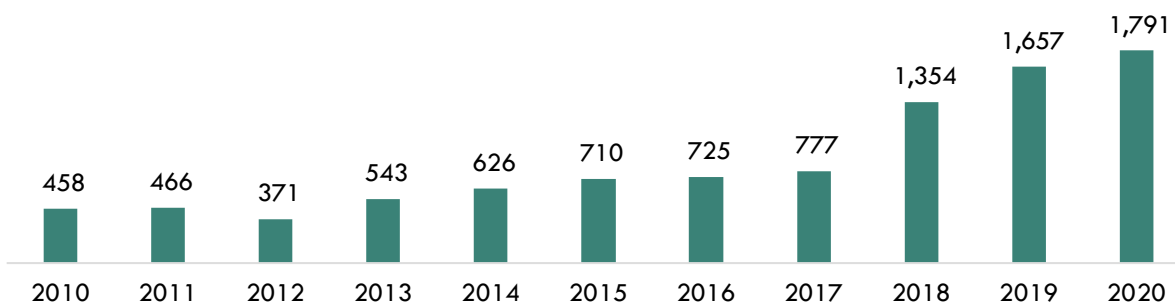
"N/A" indicates insufficient data

<sup>10</sup> 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 (traditional LMI) data, 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 2020, there was an average of 862 online job postings per year for *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County (Exhibit 7). Please note that online job postings do **not** equal labor market demand; demand is represented by annual job openings (see Exhibit 1). 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 *Inspectors, Testers, Sorters, Samplers, and Weighers* in San Diego County (2010-2020)<sup>11</sup>**



## Top Employers

Between January 1, 2018 and December 31, 2020, the top five employers in San Diego County for this occupation were *General Atomics, American Consumer Panels, GKN, Meggitt, and PAE* based on online job postings (Exhibit 8).

**Exhibit 8: Top Employers in San Diego County for *Inspectors, Testers, Sorters, Samplers, and Weighers*<sup>12</sup>**

Top Employers	
<ul style="list-style-type: none"> <li>• General Atomics</li> <li>• American Consumer Panels</li> <li>• GKN</li> <li>• Meggitt</li> <li>• PAE Incorporated</li> </ul>	<ul style="list-style-type: none"> <li>• General Dynamics</li> <li>• University of California, San Diego</li> <li>• U.S. Government</li> <li>• Northrop Grumman</li> <li>• Vivint Solar</li> </ul>

<sup>11</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2020.

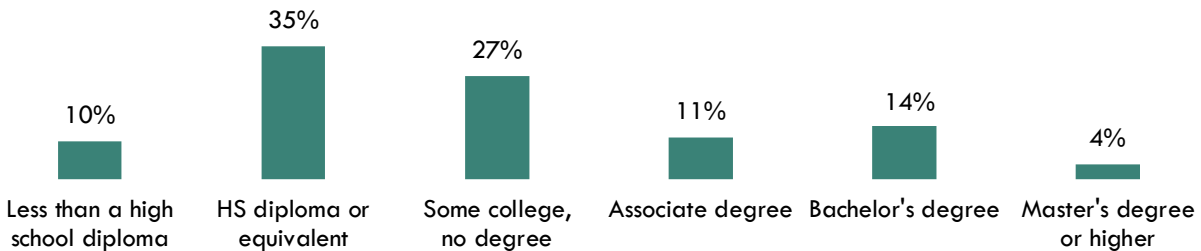
<sup>12</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.



## Education, Skills and Certifications

Exhibit 9 indicates the educational attainment for the occupation found currently in the national labor force. The typical entry-level education is a [high school diploma or equivalent](#).<sup>13</sup>

**Exhibit 9: National Educational Attainment of Inspectors, Testers, Sorters, Samplers, and Weighers<sup>14</sup>**



\*May not add to 100% due to rounding.

Exhibit 10 lists the top specialized, soft and software skills that appeared in online job postings between January 1, 2018 and December 31, 2020.

**Exhibit 10: Top Skills for Inspectors, Testers, Sorters, Samplers, and Weighers in San Diego County<sup>15</sup>**

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> <li>Quality Assurance and Control</li> <li>Quality Management</li> <li>Calipers</li> <li>Micrometers</li> <li>Calibration</li> <li>Good Manufacturing Practices</li> <li>Scheduling</li> <li>Data Entry</li> <li>Coordinate Measuring Machine</li> <li>Engineering Drawings</li> <li>Test Equipment</li> <li>Inspection Records</li> <li>Current Good Manufacturing Practices</li> <li>Repair</li> <li>Internal Auditing</li> </ul>	<ul style="list-style-type: none"> <li>Communication Skills</li> <li>Organizational Skills</li> <li>Teamwork / Collaboration</li> <li>Planning</li> <li>Physical Abilities</li> <li>Writing</li> <li>Computer Literacy</li> <li>Creativity</li> <li>Energetic</li> <li>Problem Solving</li> <li>English</li> <li>Detail-Oriented</li> <li>Leadership</li> <li>Time Management</li> <li>Building Effective Relationships</li> </ul>	<ul style="list-style-type: none"> <li>Microsoft Excel</li> <li>Microsoft Word</li> <li>Microsoft PowerPoint</li> <li>Enterprise Resource Planning</li> <li>SAP</li> <li>Microsoft Outlook</li> <li>Microsoft Access</li> <li>Word Processing</li> <li>Oracle</li> <li>Software Quality Assurance</li> <li>Selenium</li> <li>Microsoft SharePoint</li> <li>SolidWorks</li> <li>Test Tools</li> <li>Atlassian JIRA</li> </ul>

<sup>13</sup> Emsi 2020.04; QCEW, Non-QCEW, Self-Employed.

<sup>14</sup> "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](https://www.bls.gov/emp/tables/educational-attainment.htm).

<sup>15</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

Exhibit 11 lists the top certifications that appeared in online job postings between January 1, 2018 and December 31, 2020.

**Exhibit 11: Top Certifications for *Inspectors, Testers, Sorters, Samplers, and Weighers* in  
San Diego County<sup>16</sup>**

Top Certifications in Online Job Postings

1. IPC Certification
2. Security Clearance
3. American Society For Quality (ASQ) Certification
4. Certified Quality Auditor (CQA)
5. Certified Outpatient Coding (COC)
6. Certified Quality Inspector (CQI)
7. Certified Quality Engineer (CQE)
8. Certified Pharmacy Technician
9. Bio-Hazard Certification
10. Certified Quality Technician (CQT)
11. Certified Mechanical Inspector
12. Painting Certification
13. Auditor Certification
14. Six Sigma Certification
15. Certified Welding Inspector (CWI)

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<sup>16</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

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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.