

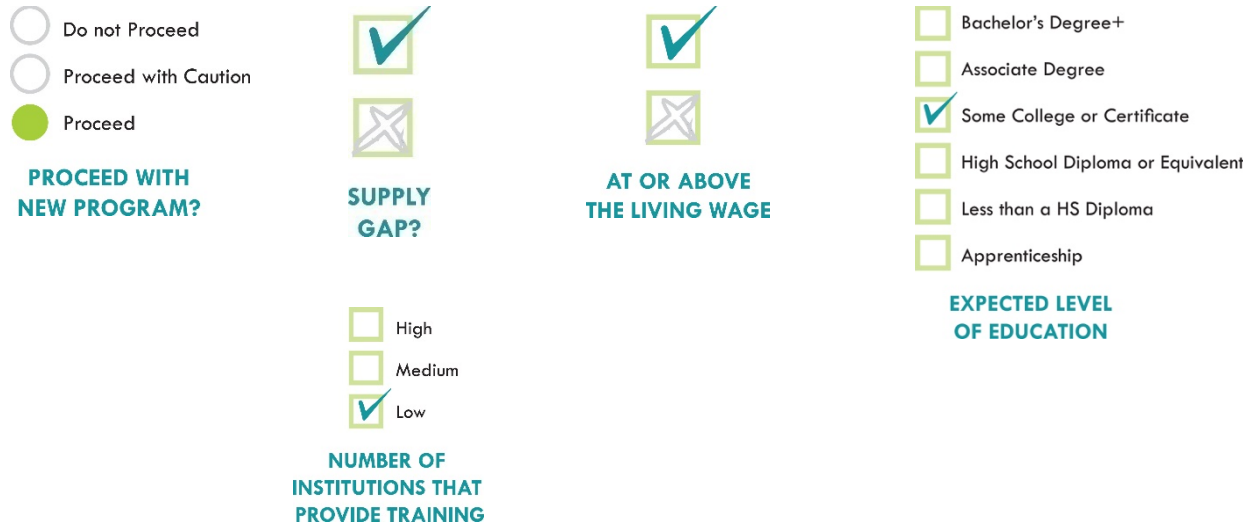
# Computer Support

## Labor Market Analysis for San Diego Continuing Education

September 2019

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### Summary



This report provides labor market information for occupation(s) selected by San Diego Continuing Education for its *Computer Support* program. The training provided by this program is likely to lead to employment as *Computer User Support Specialists*. According to available labor market information, the occupation has a labor market demand of 530 annual job openings, while average demand for an occupation in San Diego County is 277 annual job openings. Two community colleges supply the region with four for-credit awards: Palomar College and Southwestern College. While the two colleges offer certificates for *Computer Support*, they only awarded associate degrees in the past three program years. Only San Diego Continuing Education supplies noncredit awards for this occupation, which averaged 53 awards in the same period. In short, the region supplies 57 for-credit and noncredit awards for 530 annual job openings, suggesting that there is a labor market supply gap. Additionally, entry-level and median wages are above the living wage, suggesting that students who successfully complete a program and obtain employment in a related field may earn a living wage. The expected level of education for this occupation is some college, no degree.

## Introduction

This report provides labor market information (LMI) in San Diego County for occupations related to the six-digit Taxonomy of Programs<sup>1</sup> (TOP) code, Computer Support (TOP 070820). The purpose of this brief is to assist noncredit program providers in the region, such as San Diego Continuing Education (SDCE), with program development and review. SDCE identified one occupation from the Standard Occupational Classification (SOC)<sup>2</sup> system for *Computer Support*, which will be the focus of this report:

**Computer User Support Specialists** (SOC 15-1151): Provide technical assistance to computer users.

Answer questions or resolve computer problems for clients in person, or via telephone or electronically.

May provide assistance concerning the use of computer hardware and software, including printing,

installation, word processing, electronic mail, and operating systems. Sample reported job titles

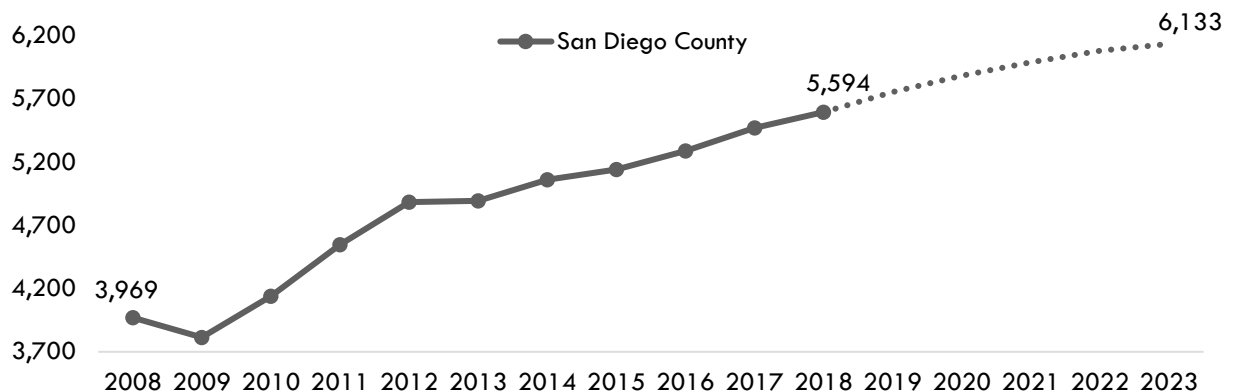
include:

- Help Desk Technician
- Desktop Support Specialist
- Technical Support Specialist
- Technical Support Representative
- Computer Specialist
- Information (IT) Technology Technician
- Information Technology (IT) Specialist
- Help Desk Analyst
- PC Technician (Personal Computer Technician)
- PC Tech (Personal Computer Technician)

## Projected Occupational Demand

Between 2018 and 2023, *Computer User Support Specialists* are projected to increase by 539 net jobs or 10 percent (Exhibit 1). Employers in San Diego County will need to hire 530 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 Computer User Support Specialists (2008-2023)<sup>3</sup>**



<sup>1</sup> Taxonomy of Programs (TOP) is a system of codes used by the California Community Colleges for the purpose of collecting, calculating, or disseminating data about similar training programs.

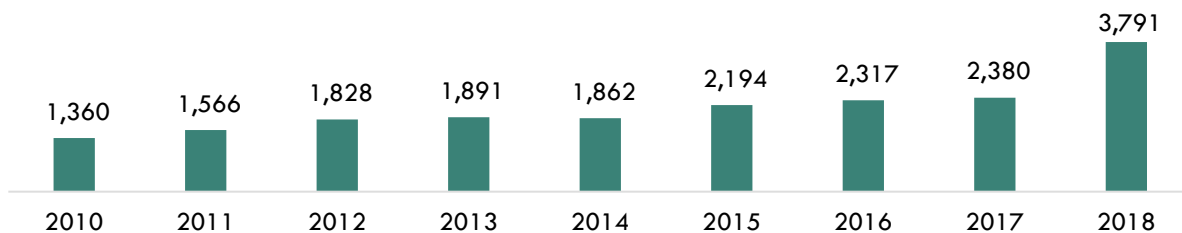
<sup>2</sup> The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc).

<sup>3</sup> Emsi 2019.03; QCEW, Non-QCEW, Self-Employed.

## 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 demand that are not captured by historical data. Between 2010 and 2018, there was an average of 2,132 online job postings per year for *Computer User Support Specialists* in San Diego County (Exhibit 2).

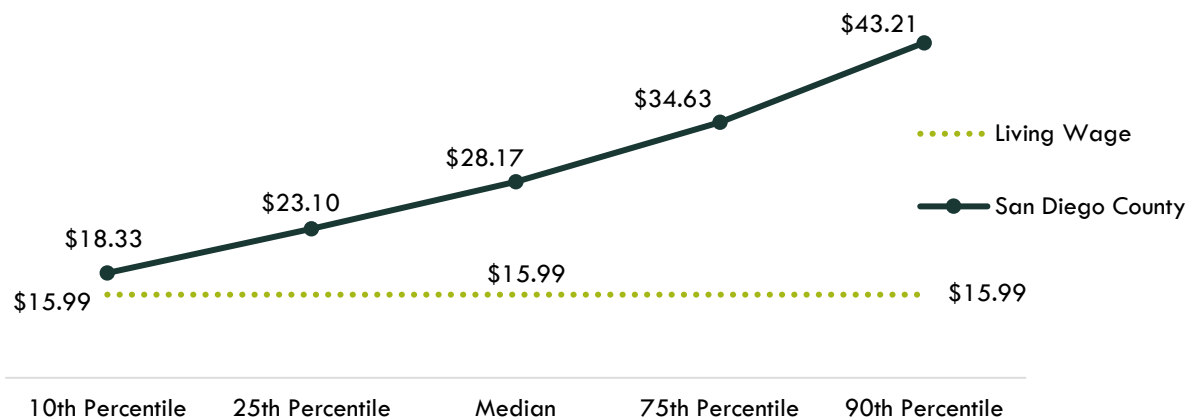
**Exhibit 2: Number of Online Job Postings for *Computer User Support Specialists* in San Diego County (2010-2018)<sup>4</sup>**



## Earnings

*Computer User Support Specialists* receive median hourly earnings of \$28.17; this is more than the living wage for a single adult in San Diego County, which is \$15.99 per hour (Exhibit 3).<sup>5</sup>

**Exhibit 3: Hourly Earnings<sup>6</sup> for *Computer User Support Specialists* in San Diego County<sup>7</sup>**



<sup>4</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2018.

<sup>5</sup> "California Family Needs Calculator." Insight Center for Community Economic Development, last updated 2018. [insightccd.org/2018-family-needs-calculator](https://insightccd.org/2018-family-needs-calculator).

<sup>6</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>7</sup> Emsi 2019.03; QCEW, Non-QCEW, Self-Employed.

## Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards conferred by a course or program in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.<sup>8</sup> According to TOP and CIP<sup>9</sup> data, two community colleges supply the region with for-credit awards for Computer Support (TOP 070820): Palomar College and Southwestern College (Exhibit 4a).

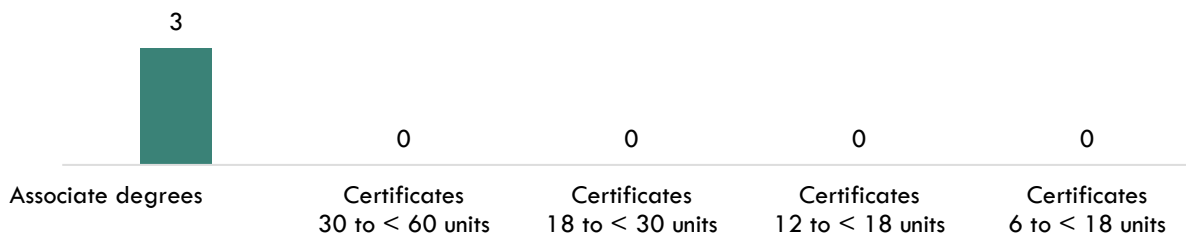
**Exhibit 4a: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Program Years 2015-16 through 2017-18)**

College	Award Type	PY 15-16	PY 16-17	PY 17-18	3-Year Avg
Palomar	Certificate 6 to < 18 units	0	1	0	0
	<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
Southwestern	Associate of Science (A.S.) degree	4	3	3	3
	Certificate 30 to < 60 units	1	0	0	0
	<b>Total</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Total</b>		<b>5</b>	<b>4</b>	<b>3</b>	<b>4*</b>

*Note: The numbers may not add up exactly due to rounding.*

While the two colleges offer certificates for Computer Support (TOP 070820), they only awarded associate degrees in the past three program years (Exhibit 4b).

**Exhibit 4b: Total Number of Awards by Type for Computer Support (TOP 070820) in San Diego County (Three-Year Average 2015-16 through 2017-18)**



<sup>8</sup> 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)

<sup>9</sup> There are two CIP codes related to Computer Support (TOP 070820): Computer and Information Systems Security/Information Assurance (CIP 111003) and Computer Support Specialist (CIP 111006).

In terms of noncredit awards, only San Diego Continuing Education provides noncredit awards for Computer Support (TOP 070820), with an average of 53 noncredit awards between program years 2015-16 and 2017-18 (Exhibit 5).

**Exhibit 5: Number of Noncredit Awards (Certificates and Degrees) Conferred by SDCE (Program Years 2015-16 through 2017-18)**

Program Title	Award Type	PY 15-16	PY 16-17	PY 17-18	3-Year Avg
Computer Repair Technician; Desktop Operating Systems; Desktop Technician; Linux Server Administration; Network Technician; Server Essentials; Web Server Technologies and Applications; Windows System Administration	Program Award	6	53	100	53

## Demand vs. Supply

In short, the region supplies 57 for-credit and noncredit awards for 530 annual job openings, suggesting that there is a labor market supply gap (Exhibit 6).

**Exhibit 6: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)**

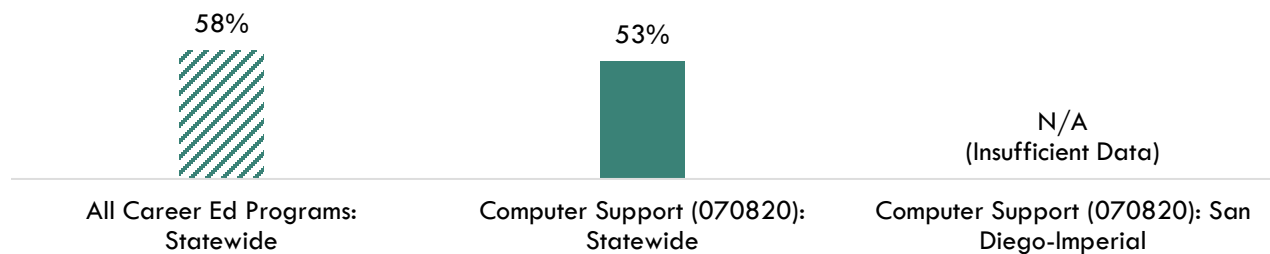
TOP6 Program	Demand (Annual Openings)	Supply (Total Annual Average Supply)		Supply Gap or Oversupply
		Noncredit	For-Credit	
Computer Support (TOP 070820)	530	53	4	<b>473</b>

**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.

## Student Outcomes and Regional Comparisons

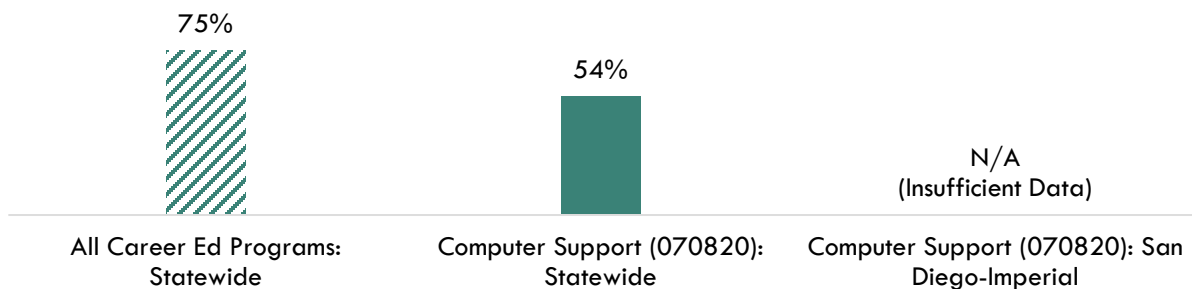
According to the California Community Colleges LaunchBoard, **N/A** percent of students (due to insufficient data) in the San Diego-Imperial region earned a living wage after completing a Computer Support (070820) program, compared to **53** percent statewide and 58 percent of students in Career Education programs in general across the state (Exhibit 7a).

**Exhibit 7a: Proportion of Students Who Earned a Living Wage, PY2015-16<sup>10</sup>**



According to the California Community Colleges LaunchBoard, **N/A** percent of students (due to insufficient data) in the San Diego-Imperial region obtained a job closely related to their field of study after completing a Computer Support (070820) program, compared to **54** percent statewide and 75 percent of students in Career Education programs in general across the state (Exhibit 7b).

**Exhibit 7b: Percentage of Students in a Job Closely Related to Field of Study, PY2014-15<sup>11</sup>**



<sup>10</sup> Among completers and skills builders who exited, the proportion of students who attained a living wage.

<sup>11</sup> Most recent year with available data is Program Year 2014-15. 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.

## Top Employers and Work Locations

Between January 1, 2016 and December 31, 2018, the top five employers in San Diego County for this occupation were [Best Buy](#), [Scripps Health](#), [U.S. Navy](#), [General Atomics](#), and [General Dynamics](#) (Exhibit 8).

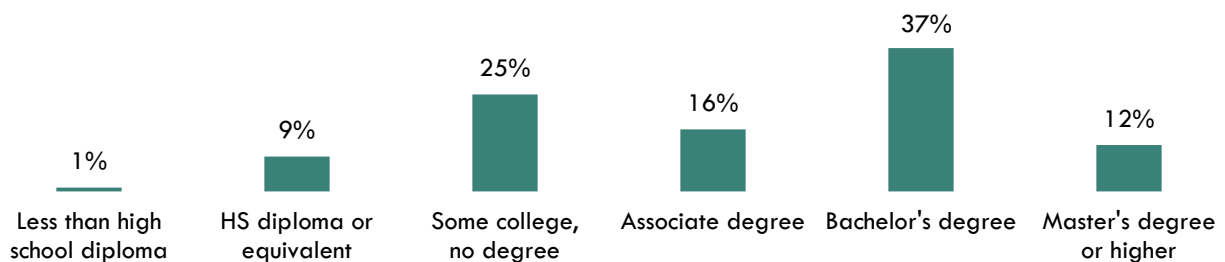
**Exhibit 8: Top Employers in San Diego County for Computer User Support Specialists<sup>12</sup>**

Top Employers	
<ul style="list-style-type: none"> <li>• Best Buy</li> <li>• Scripps Health</li> <li>• U.S. Navy</li> <li>• General Atomics</li> <li>• General Dynamics</li> </ul>	<ul style="list-style-type: none"> <li>• Jack Henry &amp; Associates</li> <li>• SAIC</li> <li>• Mitchell International Incorporated</li> <li>• University of California, San Diego</li> <li>• ServiceNow</li> </ul>

## Skills, Education, and Certifications

There is no typical on-the-job training for this occupation. Nationally, employers reported that the typical entry-level education is [some college, no degree](#). However, the educational attainment for the occupation typically found currently in the national labor force is a bachelor's degree (Exhibit 9a).<sup>13</sup>

**Exhibit 9a: National Educational Attainment for Computer User Support Specialists<sup>14</sup>**



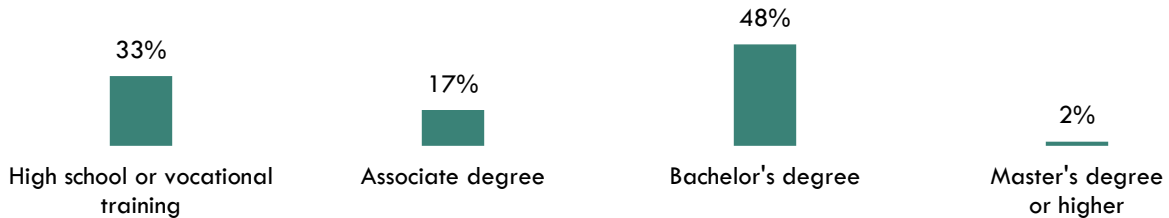
<sup>12</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2018.

<sup>13</sup> Emsi 2019.03; QCEW, Non-QCEW, Self-Employed.

<sup>14</sup> Emsi 2019.03; QCEW, Non-QCEW, Self-Employed.

Based on online job postings between January 1, 2016 and December 31, 2018, the top listed educational requirement for *Computer User Support Specialists* in San Diego County was a **bachelor's degree** (Exhibit 9b).<sup>15</sup>

**Exhibit 9b: Educational Requirements for Computer User Support Specialists in San Diego County in Online Job Postings<sup>16</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, 2016 and December 31, 2018.

**Exhibit 10: Top Skills for Computer User Support Specialists in San Diego County<sup>17</sup>**

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> <li>• Technical Support</li> <li>• Help Desk Support</li> <li>• Repair</li> <li>• Printers</li> <li>• Microsoft Active Directory</li> </ul>	<ul style="list-style-type: none"> <li>• Troubleshooting</li> <li>• Communication Skills</li> <li>• Problem Solving</li> <li>• Detail-Oriented</li> <li>• Research</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Windows</li> <li>• Microsoft Excel</li> <li>• Microsoft Operating System</li> <li>• SQL</li> <li>• Linux</li> </ul>

<sup>15</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2018.

<sup>16</sup> "Educational Attainment for Workers 25 Years and Older by Detailed Occupation," Bureau of Labor Statistics, last modified October 18, 2018. [bls.gov/emp/tables/educational-attainment.htm](https://bls.gov/emp/tables/educational-attainment.htm).

<sup>17</sup> Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2018.



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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.