

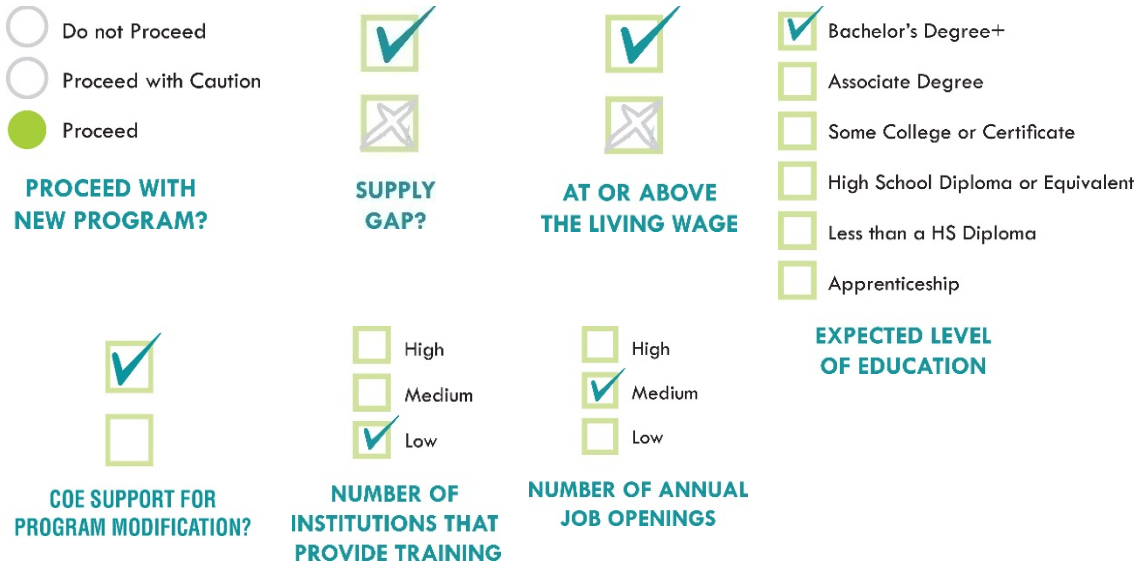
# Commercial Pilots

## Labor Market Analysis: San Diego County

January 2021

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### 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, *Commercial Pilots* in San Diego County have a labor market demand of 110 annual job openings (while average demand for a single occupation in San Diego County is 277 annual job openings), and two educational institutions in San Diego County supply 45 awards for this occupations, suggesting that there is a supply gap in the labor market. Entry-level and median wages for this occupation are above the living wage. This brief recommends proceeding with a new program modification because 1) entry-level and median earnings are above the living wage and 2) a supply gap exists for these positions.

## Introduction

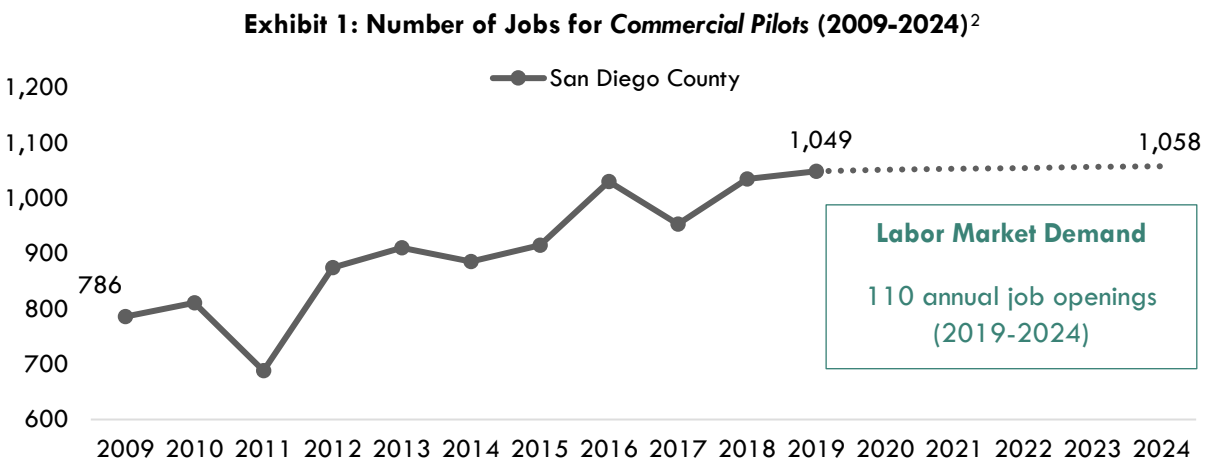
This report provides labor market information in San Diego County for the following occupational code in the Standard Occupational Classification (SOC)<sup>1</sup> system:

**Commercial Pilots (SOC 53-2012):** Pilot and navigate the flight of fixed-wing aircraft on nonscheduled air carrier routes, or helicopters. Requires Commercial Pilot certificate. Includes charter pilots with similar certification, and air ambulance and air tour pilots. Excludes regional, national, and international airline pilots. Sample reported job titles include:

- Helicopter Pilot
- Corporate Pilot
- Line Pilot
- EMS Helicopter Pilot
- Commercial Helicopter Pilot
- Charter Pilot
- Captain
- First Officer

## Projected Occupational Demand

Between 2019 and 2024, *Commercial Pilots* are projected to increase by **nine** net jobs or **one** percent (Exhibit 1). Employers in San Diego County will need to hire **110** workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.



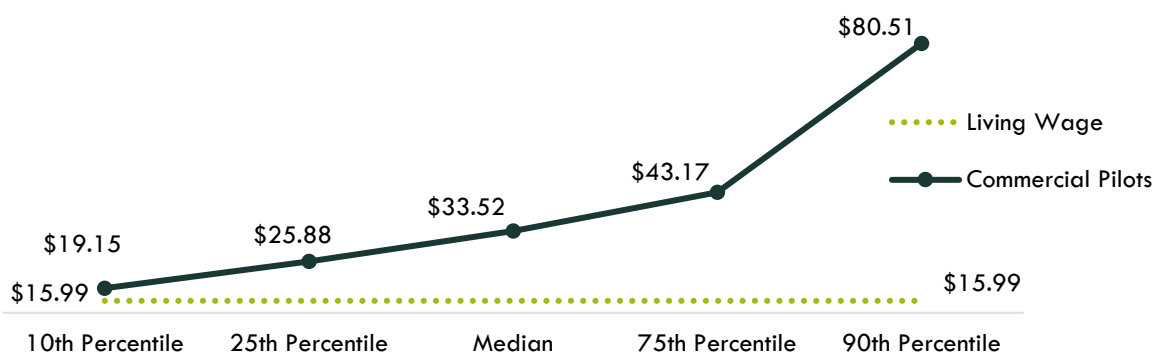
<sup>1</sup> The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc/).

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

## Earnings

*Commercial Pilots* receive entry-level hourly earnings of **\$25.88**; 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 *Commercial Pilots* 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 is **one** TOP code and **one** CIP code related to *Commercial Pilots* (Exhibit 3).

**Exhibit 3: Related TOP and CIP Codes for *Commercial Pilots***

### *Commercial Pilots*

TOP 3020.20: Piloting

CIP 48.0102: Airline/Commercial/Professional Pilot and Flight Crew

According to TOP data, **two** community colleges supply the region with awards for this occupation, **Palomar College** and **San Diego Miramar College**. According to CIP data, no non-community-college institution supplies the region with awards (Exhibit 4).

<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)).

**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)
3020.20	Piloting	<b>45</b>	<b>0</b>	<b>45</b>
	<ul style="list-style-type: none"> <li>• Palomar</li> </ul>	3	0	
	<ul style="list-style-type: none"> <li>• San Diego Miramar</li> </ul>	42	0	
			Total	<b>45</b>

### 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 **45** annual openings and **110** awards. Comparatively, there are **840** annual openings in California and **148** 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	110	45	<b>65</b>
California	840	148	<b>692</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.

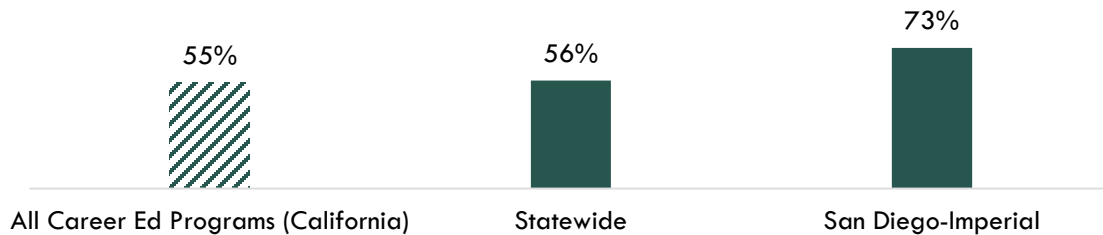
<sup>7</sup> Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

<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

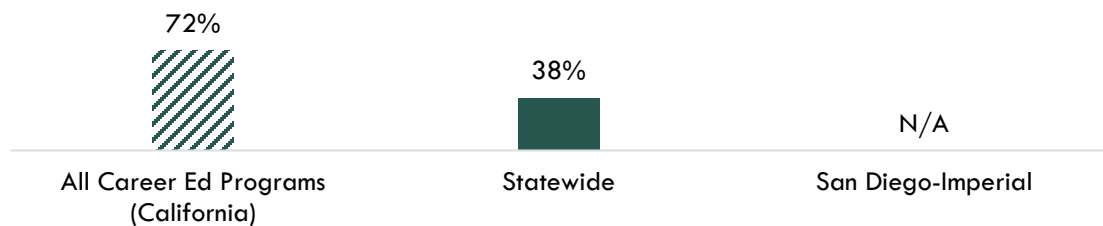
According to the California Community Colleges LaunchBoard, 73 percent of students in the San Diego-Imperial region earned a living wage after completing a Piloting (TOP 3020.20) program, compared to 56 percent statewide and 55 percent of students in Career Education programs in general across the state (Exhibit 6a).<sup>9</sup>

**Exhibit 6a: Proportion of Students Who Earned a Living Wage (Piloting, PY2017-18)<sup>10</sup>**



According to the California Community Colleges LaunchBoard, 38 percent of students statewide obtained a job closely related to their field of study after completing a Piloting program, compared to 72 percent of students in Career Education programs in general across the state (Exhibit 6b).<sup>11</sup>

**Exhibit 6b: Percentage of Students in a Job Closely Related to Field of Study (Piloting, PY2016-17)<sup>12</sup>**



<sup>9</sup> "California Community Colleges Strong Workforce Program," California Community Colleges, [calpassplus.org/LaunchBoard/SWP.aspx](http://calpassplus.org/LaunchBoard/SWP.aspx).

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

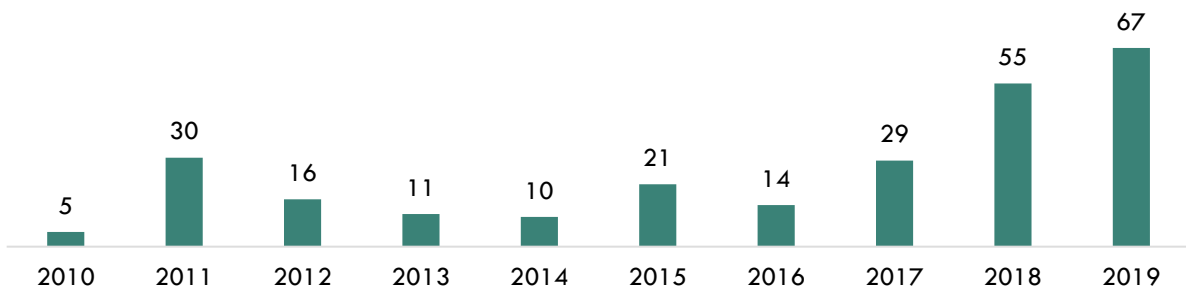
<sup>11</sup> "California Community Colleges Strong Workforce Program," California Community Colleges, [calpassplus.org/LaunchBoard/SWP.aspx](http://calpassplus.org/LaunchBoard/SWP.aspx).

<sup>12</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 2019, there was an average of 26 online job postings per year for *Commercial Pilots* 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 Commercial Pilots in San Diego County (2010-2019)<sup>13</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, Air Methods, Crew Training International, SCSBDG, and Northrop Grumman* based on online job postings (Exhibit 8).

**Exhibit 8: Top Employers in San Diego County for Commercial Pilots<sup>14</sup>**

Top Employers	
<ul style="list-style-type: none"><li>• General Atomics</li><li>• Air Methods</li><li>• Crew Training International</li><li>• SCSBDG, LLC</li><li>• Northrop Grumman</li></ul>	<ul style="list-style-type: none"><li>• Viasat</li><li>• SAIC</li><li>• Berry Aviation</li><li>• Skywest Airlines</li><li>• Pkl Services, Inc.</li></ul>

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

<sup>14</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 [bachelor's degree](#).<sup>15</sup>

**Exhibit 9: National Educational Attainment of Commercial Pilots<sup>16</sup>**

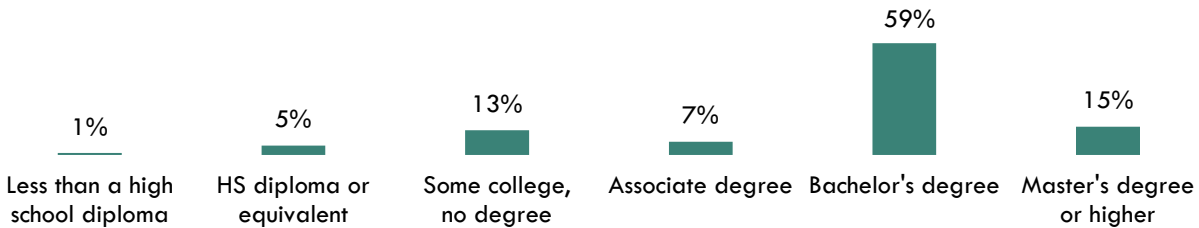


Exhibit 10 lists the top specialized, soft and software skills that appeared in online job postings between January 1, 2018 and December 31, 2020.

**Exhibit 10: Top Skills for Commercial Pilots in San Diego County<sup>17</sup>**

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> <li>• Federal Aviation Regulations</li> <li>• Flight Safety</li> <li>• Aviation Regulations</li> <li>• Resource Management</li> <li>• Flight Planning</li> <li>• Scheduling</li> <li>• Federal Aviation Administration Regulations</li> <li>• Crew Resource Management</li> <li>• Surveillance</li> <li>• Repair</li> <li>• Patient Transportation and Transfer</li> <li>• Systems Integration</li> <li>• Multi-Engine Land</li> <li>• Training Materials</li> <li>• Fuel Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Communication Skills</li> <li>• Planning</li> <li>• Computer Literacy</li> <li>• Written Communication</li> <li>• Building Effective Relationships</li> <li>• Organizational Skills</li> <li>• Troubleshooting</li> <li>• English</li> <li>• Physical Abilities</li> <li>• Detail-Oriented</li> <li>• Teamwork / Collaboration</li> <li>• Multi-Tasking</li> <li>• Typing</li> <li>• Editing</li> <li>• Mentoring</li> </ul>	<ul style="list-style-type: none"> <li>• Microsoft Excel</li> <li>• Microsoft PowerPoint</li> <li>• Microsoft Word</li> <li>• Test Director</li> <li>• Firebird</li> <li>• Customer Relationship Management (CRM)</li> <li>• Facebook</li> <li>• Microsoft Azure</li> <li>• Word Processing</li> </ul>

<sup>15</sup> Emsi 2020.04; QCEW, Non-QCEW, Self-Employed.

<sup>16</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://bls.gov/emp/tables/educational-attainment.htm).

<sup>17</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 15 Certifications for Commercial Pilots in San Diego County<sup>18</sup>**

Top Certifications in Online Job Postings

1. Security Clearance
2. Pilot Certification
3. Airline Transport Pilot License
4. Certified Flight Instructor (CFII)
5. Apple Certified Technical Coordinator
6. Hazardous Materials Certification
7. CDL Class C
8. Commercial Pilot's License
9. Property and Casualty License
10. Microsoft Certified Professional (MCP)
11. Insurance Agent Certification
12. Federal Aviation Administration (FAA) Certification

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<sup>18</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.