

Program Endorsement Brief: 0950.40 – Aircraft Electronics (Avionics)

Avionics Certificate of Achievement

Los Angeles/Orange County Center of Excellence, May 2021

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met <input type="checkbox"/>	Endorsed: Some Criteria Met <input checked="" type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> (see notes below)	
Living Wage: (Entry-Level, 25 th)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>	

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to one middle-skill occupation: *avionics technicians* (49-2091). Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree.¹ This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupation.

Based on the available data, there does not appear to be a supply gap for *avionics technicians* in the region. The oversupply is due to the high number of completions for the Airframe Mechanics and Aircraft Maintenance Technology/Technician non-community college program. While these awards must be taken into account, the program mentioned above has historically trained for a wide range of occupations – meaning the supply for avionics, specifically, may be overstated.

NOTE: the entry-level hourly wage for *avionics technicians* exceeds the living wage in Los Angeles County, and this occupation typically requires an associate degree. **Therefore, due to some of the criteria being met, the COE endorses the proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **78 jobs available annually** in the region due to new job growth and replacements, **which is less than the 322 awards conferred annually** by educational institutions in the region.

¹ The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor’s degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

- **Living Wage Criteria** – In Los Angeles County, the **typical entry-level hourly wage** for *avionics technicians* is **\$23.22, which is higher than the California Family Needs Calculator** hourly wage (living wage) for one adult in the region (\$15.04 in Los Angeles County).²
- **Educational Criteria** – The Bureau of Labor Statistics (BLS) lists an associate degree as the typical entry-level education for *avionics technicians* (49-2091).
 - National-level educational attainment data indicates **61% of workers in the field have completed some college or an associate degree.**

Supply:

- Between 2017 and 2020, **four community colleges** in the LA/OC region issued awards in aeronautical and aviation technology, conferring an average of **54 awards**.
 - **Completions are for aeronautical and aviation technology (0950.00), not aircraft electronics (avionics) (TOP 0950.40). Currently, no community colleges in the region have conferred any awards under the TOP 0950.40.**
- Between 2016 and 2019, there was an average of **268 awards conferred** in related training programs by non-community college institutions.
 - **Completions were for the Airframe Mechanics and Aircraft Maintenance Technology/Technician program, which has historically trained for a wide range of occupations – meaning supply could be overstated.**

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for *avionics technicians*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 9% through 2024. There will be nearly 80 job openings per year through 2024 due to job growth and retirements and workers leaving the field.

This report includes employment projection data by Emsi which uses EDD information. 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. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it 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. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

² Living wage data was pulled from California Family Needs Calculator on 5/27/2021. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	708	787	79	11%	65
Orange	168	170	2	1%	13
Total	876	958	82	9%	78

Wages

The labor market endorsement in this report considers the hourly wages for *avionics technicians* in Los Angeles County, as they relate to the county's living wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County: The typical entry-level hourly wage for *avionics technicians* is \$23.22, which is above the living wage for one adult (\$15.04 in Los Angeles County). Experienced workers can expect to earn wages of \$39.82, which is higher than the living wage estimate.

Orange County: The typical entry-level hourly wage for *avionics technicians* is \$22.47, which is above the living wage for one adult (\$17.36 in Orange County). Experienced workers can expect to earn \$38.58, which is higher than the living wage estimate.

Job Postings

Over the past 12 months, there have been 213 online job postings for *avionics technicians*. The highest number of job postings were for composite technician, avionics technician, and senior principal engineer ground systems installation. The top skills were system engineering, procurement, and hardware and software installation. The top employers, by number of job postings, in the region were Northrop Grumman, SpaceX, and Applied Composites Lake Forest.

It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists an associate degree as the typical entry-level education for *avionics technicians* (49-2091). National-level educational attainment data indicates 61% of workers in the field have completed some college or an associate degree. Of the 69% job postings listing a minimum education requirement in Los Angeles/Orange County, 73% (108) requested a high school diploma, 16% (24) requested an associate degree, and 11% (16) requested a bachelor's degree.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Educational Supply

Community College Supply — Exhibit 2 shows the annual and three-year average number of awards conferred by community colleges in the related TOP code: Aeronautical and Aviation Technology (0950.00). The college with the most completions in the region is Orange Coast. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

Exhibit 2: Regional community college awards (certificates and degrees), 2017-2020

TOP	Program	College	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
0950.00	Aeronautical and Aviation Technology	Long Beach	1	-	1	1
		Mt San Antonio	8	13	4	8
		West LA	7	8	6	7
		LA Subtotal	16	21	11	16
		Orange Coast	36	34	43	38
		OC Subtotal	36	34	43	38
Supply Total/Average			52	55	54	54

Non-Community College Supply — It is important to consider the supply from non-community college institutions in the region that provide relevant training programs. Exhibit 3 shows the annual and three-year average number of awards conferred by one institution in the related Classification of Instructional Programs (CIP) Codes: 47.0607 – Airframe Mechanics and Aircraft Maintenance Technology/Technician. Due to different data collection periods, the most recent three-year period of available data is from 2016 to 2019. Between 2016 and 2019, one non-community college institution in the region conferred an average of 268 awards annually in related training program(s).

Exhibit 3: Regional non-community college awards, 2016-2019

CIP	Program	Institution	2016-17 Awards	2017- 18 Awards	2018- 19 Awards	3-Year Average
47.0607	Airframe Mechanics and Aircraft Maintenance Technology/ Technician	Spartan College of Aeronautics & Technology	300	291	213	268
Supply Total/Average			300	291	213	268

Appendix A: Occupational demand and wage data by county

Exhibit 4. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Avionics Technicians (49-2091)	708	787	79	11%	65	\$23.22	\$31.74	\$39.82
Total	708	787	79	11%	65			

Exhibit 5. Orange County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Avionics Technicians (49-2091)	168	170	2	1%	13	\$22.47	\$30.58	\$38.58
Total	168	170	2	1%	13			

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education
Avionics Technicians (49-2091)	876	958	82	9%	78	Associate degree
Total	876	958	82	9%	78	

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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May 2021

