



Program Endorsement Brief: 0934.00/Electronics and Electric Technology Automation Technician; NETA High Voltage Technician

Los Angeles/Orange County Center of Excellence, October 2018

Summary:

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide regional labor market supply and demand data related to electronics and electric technology. 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 relevant occupations.

The following summarizes key findings from this data brief:

- The number of jobs for middle-skill electronics and electric technology-related occupations is projected to decrease by 1% over the next five years. However, nearly 900 job openings will be available annually due to replacement need (e.g. retirements).
- Over the past 12 months, there were 1,029 online job postings related to electronics and electric technology in Los Angeles and Orange Counties. There were 56 job postings for automation technicians, and one job posting that requested NETA certification.
- Sixteen colleges in the region have programs closely related to electronics and electric technology.
- Between 2014 and 2017, community colleges in the region conferred an average of 366 awards (associate degrees and certificates) in related training programs.

Occupational Demand—In Los Angeles/Orange County, the number of jobs for middle-skill electronics and electric technology-related occupations is projected to decrease by 1%. However, there will be nearly 900 job openings per year through 2022 (Exhibit 1) due to replacement need (e.g. retirements).

Exhibit 1: Occupational demand in Los Angeles and Orange Counties¹

Geography	2017 Jobs	2022 Jobs	2017-2022 Change	2017-2022 % Change	Annual Openings
Los Angeles	6,547	6,438	(109)	(2%)	563
Orange	3,713	3,672	(41)	(1%)	320
Total	10,259	10,110	(149)	(1%)	882

¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Wages—Entry-level wages for electronics and electric technology positions in the region are between \$13.78 and \$34.38 per hour. Entry-level wages for four of the five electronics and electric technology occupations are higher than the MIT Living hourly wage for one adult in the region (\$13.54 in Los Angeles County, \$15.31 in Orange County). Experienced workers earn between \$30.57 and 59.76, which is higher than the living wage.

Job Postings—There were 1,029 online job postings related to electronics and electric technology listed in the past 12 months. The majority of job postings are for electronics technician, test technician, electrical technician, machining technician and electro-mechanical technician. Top specialized skills are: schematic designs, test equipment, soldering, and wiring. The top three employers, by number of job postings, in the region are: Arconic, Northrop Grumman, and Outsource (staffing agency).

Of these 1,029 online job postings, 56 were for automation technicians. Top specialized skills for automation technicians included repair, wiring, schematic designs, ladder logic and failure analysis. Top employers, by number of job postings, in the region are: Cast Rite Corporation and Ferguson Enterprises.

Only one of the 1,029 job postings mentioned NETA certification as a qualification for job applicants.

Educational Attainment—The BLS lists a postsecondary certificate award or an associate degree as the typical entry-level education for these occupations. The national-level educational attainment data indicates between 42% and 57% of workers in the field have completed some college or an associate degree. In Los Angeles/Orange County, 60% of job postings request high school or vocational training.

Community College Supply—Appendix A shows the annual and three-year average number of awards conferred by community colleges in the related TOP code: Electronics and Electric Technology (0934.00). The colleges with the most completions in the region are: Coastline, Mt. San Antonio College, and Long Beach. Between January and September 2018, there were two other community college requests for data related to a similar program.

Appendix A: Regional community college awards (certificates and degrees), 2014-2017

TOP Code	Program	College	2014-15 Awards	2015-16 Awards	2016-2017 Awards	3-Year Award Average
0934.00	Electronics and Electric Technology	Coastline	123	128	100	117
		East LA	7	21	12	13
		El Camino	2	2	6	3
		Glendale	7	3	9	6
		Irvine	15	21	25	20
		LA City	1	2	14	6
		LA Pierce	15	33	34	27
		LA Southwest	5	7	3	5
		LA Valley	12	25	23	20
		Long Beach	50	51	44	48
		Mt San Antonio	67	42	36	48
		Orange Coast	6	7	7	7
		Pasadena	19	3	27	16
		Rio Hondo	-	-	1	0
		Saddleback	25	9	17	17
Santa Ana	9	8	14	10		
		Total	363	362	372	366

Appendix B: Occupational demand and wage data by county

Exhibit 3. Los Angeles County

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Electrical and Electronics Engineering Technicians (17-3023)	3,520	3,462	(58)	(2%)	301	\$17.62	\$32.25	\$49.95
Electrical and Electronics Repairers, Commercial and Industrial Equipment (49-2094)	1,161	1,141	(20)	(2%)	99	\$12.46	\$25.97	\$45.27
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay (49-2095)	907	877	(30)	(3%)	77	\$35.01	\$47.85	\$60.31
Electric Motor, Power Tool, and Related Repairers (49-2092)	564	559	(5)	(1%)	51	\$15.99	\$22.47	\$30.48
Electrical and Electronics Installers and Repairers, Transportation Equipment (49-2093)	395	399	4	1%	35	\$30.65	\$41.25	\$49.12
Total	6,547	6,438	(109)	(2%)	563			

Exhibit 4. Orange County

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Electrical and Electronics Engineering Technicians (17-3023)	2,330	2,305	(25)	(1%)	198	\$14.64	\$26.09	\$44.16
Electrical and Electronics Repairers, Commercial and Industrial Equipment (49-2094)	1,035	1,046	11	1%	92	\$17.08	\$25.36	\$39.73
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay (49-2095)	206	176	(30)	(15%)	16	\$28.84	\$43.84	\$57.23
Electric Motor, Power Tool, and Related Repairers (49-2092)	94	95	1	1%	9	\$16.52	\$23.18	\$30.96
Electrical and Electronics Installers and Repairers, Transportation Equipment (49-2093)	47	50	3	6%	5	\$29.19	\$41.83	\$48.63
Total	3,713	3,672	(41)	(1%)	320			

Exhibit 5. Los Angeles and Orange Counties

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Electrical and Electronics Engineering Technicians (17-3023)	5,850	5,767	(83)	(1%)	498	\$16.36	\$30.20	\$47.39
Electrical and Electronics Repairers, Commercial and Industrial Equipment (49-2094)	2,196	2,187	(9)	(0%)	191	\$13.78	\$25.55	\$42.74
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay (49-2095)	1,114	1,053	(61)	(5%)	93	\$34.38	\$47.06	\$59.76
Electric Motor, Power Tool, and Related Repairers (49-2092)	658	654	(4)	(1%)	60	\$16.07	\$22.58	\$30.57
Electrical and Electronics Installers and Repairers, Transportation Equipment (49-2093)	442	449	7	2%	40	\$30.56	\$41.31	\$49.05
Total	10,259	10,110	(149)	(1%)	882			

Appendix C: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (EMSI)
- Employment Development Department, Labor Market Information Division, OES
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- MIT Living Wage

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