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Program Endorsement Brief: 0935.00/Electro-Mechanical Technology
Robotics 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 electro-mechanical 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:

- Electro-mechanical and mechanical engineering technician jobs are decreasing by 1% over the next five years but nearly 200 job openings will be available annually due to replacement need.
- Over the past 12 months, there were 580 online job postings related to electro-mechanical and mechanical engineering technicians in Los Angeles and Orange Counties, and 31 of these job postings were for robotics technicians.
- No colleges in the region have programs closely related to electro-mechanical technology.
- Between 2014 and 2017, California community colleges conferred an average of one award annually (associate degrees and certificates) in related training programs.

Occupational Demand—In Los Angeles/Orange County the number of jobs for electro-mechanical and mechanical technicians is projected to decrease by 1%. However, due to workers retiring or otherwise leaving the field, there will be nearly 200 job openings per year through 2022 (Exhibit 1).

Exhibit 1: Occupational demand in Los Angeles and Orange Counties[1]

Geography	2017 Jobs	2022 Jobs	2017-2022 Change	2017-2022 % Change	Annual Openings
Los Angeles	1,498	1,458	(40)	(3%)	128
Orange	785	794	9	1%	70
Total	2,283	2,252	(31)	(1%)	199

Wages—Entry-level wages for electro-mechanical and mechanical engineering technicians in the region are between $17.19 and $19.52. Entry-level wages 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).

[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.

Experienced workers earn between $38.49 and $43.43 per hour, which is higher than the living wage. Regional wages are above the average statewide wage for this occupation.

Job Postings—There were 580 online job postings related to electo-mechanical and mechanical engineering technicians listed in the past 12 months. The majority of job postings are for mechanical technicians, electronics technicians, calibration technicians and instrumentation technicians. **There were 31 jobs postings over the last 12 months for robotics technicians.** Top specialized skills are: calibration, schematic diagrams and soldering. The top two employers, by number of job postings, in the region are: Northrop Grumman and General Atomics.

Educational Attainment—The BLS lists an associate degree as the typical entry-level education for this occupation. The national-level educational attainment data indicates 55% of workers in the field have completed some college or an associate degree. In Los Angeles/Orange County, 72% of job postings request high school or vocational training.

Community College Supply—Appendix A shows the three-year average number of awards conferred by community colleges in the related TOP code: Electro-Mechanical Technology (0935.00). **There are no colleges in the region that have recently conferred awards aligned with this TOP code.** Only two community colleges in the state offer related programs: San Joaquin Delta and Skyline. Between January and September 2018, there was one other related program recommendation request from a regional community college.

Appendix A: Regional community college awards (certificates and degrees), 2014-2017[2]

TOP Code	Program	College/Region	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
0935.00	Electro-Mechanical Technology	San Joaquin Delta/Central CA	-	-	2	1
		Skyline/Bay Area	-	1	-	0
		Total/Average	**-**	**1**	**2**	**1**

Appendix B: Occupational demand and wage data by county

Exhibit 2. 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
Electro-Mechanical Technicians (17-3024)	328	322	(6)	(2%)	28	$17.02	$27.07	$45.01
Mechanical Engineering Technicians (17-3027)	1,170	1,135	(35)	(3%)	100	$19.98	$30.87	$43.03

Total	**1,498**	**1,458**	**(40)**	**(3%)**	**128**			

Exhibit 3. 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
Electro-Mechanical Technicians (17-3024)	337	333	(4)	(1%)	29	$17.44	$27.48	$35.38
Mechanical Engineering Technicians (17-3027)	448	461	13	3%	41	$18.10	$29.09	$44.44
Total	**785**	**794**	**9**	**1%**	**70**			

Exhibit 4. 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
Electro-Mechanical Technicians (17-3024)	664	655	(9)	(1%)	57	$17.19	$27.37	$38.49
Mechanical Engineering Technicians (17-3027)	1,618	1,596	(22)	(1%)	141	$19.52	$30.29	$43.43
Total	**2,283**	**2,252**	**(31)**	**(1%)**	**199**			

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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