

# Cultivate In-Demand Skills With Electric Vehicle Apprenticeships

Competencies in Electric Vehicle Roles Are What the Workforce Needs Most



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## Cultivate In-Demand Skills With Electric Vehicle Apprenticeships

### Competencies in Electric Vehicle Roles Are What the Workforce Needs Most

***Invest in electric vehicle apprenticeships and develop increasingly needed skills.***

Employers are increasingly searching for dependable and sustainable talent pipelines to develop rapidly growing skills and fill in-demand and emerging roles. These might be pipelines that source external talent or ones that upskill and reskill current employees — or both. The electric vehicle (EV) sector is a powerful example of a growing industry turning to apprenticeships as a talent solution.

EV manufacturers Rivian, Panasonic, and Tesla have all established Registered Apprenticeship programs for key roles like Tool and Die Maker (Tesla), Industrial Machine/Maintenance Mechanic (Rivian and Panasonic), and Skilled Maintenance Technician (Panasonic).

In addition to preparing apprentices for jobs at these companies, the programs are preparing them for long-term opportunity and success. The top five skills required for each role, as defined by the [Registered Apprenticeship Standards Library](#), correspond to the top five rapidly growing skills according to the global labor market intelligence firm Lightcast.

This means that EV apprenticeships are a powerful talent pipeline strategy — when you train your EV apprentices for key roles, you are developing in them skills that are projected to grow in demand, making EV apprenticeships valuable — and appealing — to the present and future workforce. Employees trained for EV roles enter your workforce with valuable skills and are well-positioned for growth within your organization.

Let's take a look.

EV Skills Build Dependable and Sustainable Talent Pipelines			
Role	Top Five Skills (Lightcast)	Projected Skill Growth <sup>1</sup>	Select Required Skills (Apprenticeship Standards)
Tool and Die Maker <sup>2</sup>	Gas Tungsten Arc Welding	26.7%	<ul style="list-style-type: none"><li>Operate welding equipment</li></ul>
	Machining	26.5%	<ul style="list-style-type: none"><li>Measure dimensions of completed products or workpieces to verify conformance to specifications</li></ul>

<sup>1</sup> Based on Lightcast's two-year forecasts.

<sup>2</sup> Click [here](#) to learn more about Tool and Die Maker standards.

			<ul style="list-style-type: none"> <li>• Mount materials or workpieces onto production equipment</li> <li>• Shape metal workpieces with hammers or other small hand tools</li> </ul>
	Overhead Crane Operation	25.7%	<ul style="list-style-type: none"> <li>• Lift materials or workpieces using cranes or other lifting equipment</li> </ul>
	Tooling	25.5%	<ul style="list-style-type: none"> <li>• Assemble machine tools, parts, or fixtures</li> <li>• Design tools, fixtures, or other devices for production equipment</li> </ul>
	Computer Numerical Control (CNC) Machining	24.6%	<ul style="list-style-type: none"> <li>• Develop and design new tools and dies, using computer-aided design software</li> </ul>
Industrial Machine/Maintenance Mechanic <sup>3</sup>	Machining	26.5%	<ul style="list-style-type: none"> <li>• Perform basic welding and achieve necessary strength, resilience, shape, and size requirements</li> <li>• Prepare parts to be welded, including degreasing, cleaning, grinding, and inspecting</li> <li>• Inspect welds for integrity and functionality</li> </ul>
	Tooling	25.5%	<ul style="list-style-type: none"> <li>• Use an acetylene torch properly while using appropriate safety equipment and precautions to cut steel parts</li> <li>• Use plasma cutter to cut flat stock</li> </ul>

<sup>3</sup> Click [here](#) and [here](#) to learn more about Industrial Machine/Maintenance Mechanic standards.

			<ul style="list-style-type: none"> <li>• Accurately measure, cut, and prepare piping for installation</li> </ul>
	Equipment Repair	25.0%	<ul style="list-style-type: none"> <li>• Repair worn, damaged, or defective mechanical parts</li> <li>• Clean equipment, parts, or tools to repair or maintain them in good working order</li> <li>• Disassemble equipment for maintenance or repair and then reassemble them</li> </ul>
	Continuous Improvement Process	23.4%	<ul style="list-style-type: none"> <li>• Adjust equipment to ensure optimal performance</li> <li>• Inspect mechanical equipment to locate damage, defects, or wear</li> <li>• Test mechanical equipment to ensure proper functioning</li> </ul>
	Blueprinting	21.4%	<ul style="list-style-type: none"> <li>• Read and interpret technical drawings of parts and assemblies with tolerances and basic Geometric Dimensioning and Tolerancing (GD&amp;T)</li> <li>• Interpret basic fluid power schematics and identify schematic symbols, process flow, and operation of the components and systems</li> <li>• Interpret basic piping schematics, including specifications and fittings</li> </ul>

Skilled Maintenance Technician <sup>4</sup>	Equipment Repair	25.0%	<ul style="list-style-type: none"> <li>• Replace worn, damaged, or defective mechanical parts</li> <li>• Install machine or equipment replacement parts</li> <li>• Read technical information needed to perform maintenance or repairs</li> </ul>
	Operations Management	20.6%	<ul style="list-style-type: none"> <li>• Supervise employees</li> <li>• Train others in operational procedures</li> </ul>
	Ammeter	20.6%	<ul style="list-style-type: none"> <li>• Assemble electrical components, subsystems, or systems</li> <li>• Install electrical components, equipment, or systems</li> <li>• Repair electrical circuits or wiring</li> </ul>
	Quality Management Systems	20.4%	<ul style="list-style-type: none"> <li>• Inspect mechanical components of vehicles to identify problems</li> <li>• Troubleshoot equipment or systems operation problems</li> <li>• Train others in operational procedures</li> </ul>
	Electrical Wiring	20.1%	<ul style="list-style-type: none"> <li>• Assemble electrical components, subsystems, or systems</li> <li>• Install electrical components, equipment, or systems</li> <li>• Repair electrical circuits or wiring</li> </ul>

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<sup>4</sup> Click here to learn more about [Skilled Maintenance Technician](#) standards.