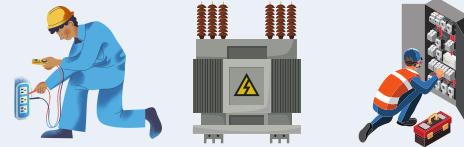


Electricians



Electricians are skilled trade workers, whose main work consists of utilizing analytical, quality control and troubleshooting skills and abilities for maintenance and diagnostic tasks on electrical systems. Regular hands-on work tasks, experience with various tools and equipment, combined with their unique set of skills enables transition into occupations within the skilled trades. Electricians may be able to transition to skilled trade roles within manufacturing.

Skills

Skills are developed through training and experience, and are the practical proficiencies someone possesses. The following are top key skills electricians employ in their work:

1. Troubleshooting
2. Repairing
3. Installation
4. Critical Thinking
5. Quality Control Analysis

Technical Knowledge

Technical Knowledge is the understanding of theory and utility of modern tools in a work environment. The following tools are used by electricians regularly:

1. Computer-aided design software
2. Industrial control software
3. Customer relationship management software
4. Analytical or scientific software
5. Office suite software

Tasks

Tasks are the assigned duties that an occupational group performs in their daily work. The following are the tasks electricians most regularly encounter:

1. Test electrical equipment or systems to ensure proper functioning.
2. Research product safety.
3. Install electrical components, equipment, or systems.
4. Investigate safety of work environment.
5. Inspect equipment to locate or identify electrical problems.

Abilities

Abilities refer to the innate faculties that allow workers to carry out tasks and activities. The following are the top abilities that electricians possess:

1. Inductive & Deductive Reasoning
2. Problem Sensitivity
3. Information Ordering
4. Visual Color Discrimination
5. Manual Dexterity

Skills Transferability Matrix

FOCAL's Skills Transferability Matrices analyze the transferability of an occupation across a multitude of other occupations on the basis of similarities in **skills, technical knowledge, tasks, and abilities** as outlined by the O*Net database. It aims to show workers how to leverage their skill set in changing occupations, planning a career path, and transitioning to other industries. It also assists policy makers and educators address changing skill sets and areas of opportunity for workforce entrants in developing industries. Employers can also use this tool in reskilling or upskilling workers to circumvent skills shortages, and reduce the hiring and training challenges.

Electricians					
Occupations	Skills	Technical Knowledge	Tasks	Abilities	Total
Automotive service technicians, truck/bus mechanics & mechanical repairers	81%	63%	39%	88%	68%
Heavy-duty equipment mechanics	81%	72%	24%	91%	67%
Plumbers	81%	75%	23%	89%	67%
Gas fitters	80%	63%	28%	86%	64%
Heating, refrigeration and air conditioning mechanics	88%	56%	7%	91%	60%
Construction millwrights and industrial mechanics	83%	75%	0%	84%	60%
Industrial electricians	80%	75%	0%	83%	59%
Construction millwrights and industrial mechanics	83%	59%	0%	89%	58%
Steamfitters, pipefitters and sprinkler system installers	81%	56%	0%	92%	57%
Telecommunications installation and repair workers	87%	44%	6%	89%	56%
Appliance servicers and repairers	81%	50%	0%	89%	55%
Machinists and machining and tooling inspectors	76%	47%	8%	88%	55%
Oil and solid fuel heating mechanics	88%	34%	2%	90%	54%
Supervisors, other mechanical and metal products manufacturing	72%	53%	0%	81%	52%

After scanning over 2,600 skills, technical competencies, tasks, and abilities of each of the 500 occupations as defined by the National Occupational Classification (NOC) system, a skills transferability matrix for electricians is produced. In the matrix above, a high score is highlighted in green and indicates the high transferability potential of an attribute of an occupation with that of electricians. Lower or no transferability areas are marked in red. With a wide array of tasks relating to diagnostic and troubleshooting work, similar abilities and knowledge are observed in mechanical work, particularly with automotive and heavy-duty equipment servicing. Though requiring additional training, electricians share transferable attributes to skilled trades working on other utility systems, such as heating and air-conditioning or plumbing. There is moderate observed transferability to machining and supervision of mechanical product manufacturing, indicating that electricians may be able to transition out of service related occupations and into manufacturing.

To learn more about developments, trends and new technologies in Canada's automotive manufacturing industry, visit our website futureautolabourforce.ca.

You can also check our social media by following these links:



[/focalinitiative](https://www.instagram.com/focalinitiative)



[@FocalInitiative](https://twitter.com/FocalInitiative)



[/focal-initiative](https://www.linkedin.com/company/focal-initiative)