

Advance Buffalo – Industrial Electrician Skills Levels

Level 1 – Electrician Helper 100% supervision	Level II – Able to install, maintain and repair electrical wiring, equipment	Level III – Advance level. Able to test design and set up	Level IV – Full autonomy; capable of lead role; ability to perform all the other levels
<p>Process</p> <ul style="list-style-type: none"> • Able to read blueprint or read CAD printouts • Begin to read mechanical blueprint • Understand tool set (hand tools) • Understand safety concerns and knowledge • Understand Low voltage 120/240 • Single phase and DC circuits 	<p>Process</p> <ul style="list-style-type: none"> • Sketch a blue print and read High voltage 480/600 • Knowledge of NEC (code) • 3 phase power (industrial) • Knowledge of beginning machine control (CNC, PLC, DCS) • Use tool set including multi meter • Read instruction manuals in any language • Begin testing and troubleshooting (calibration verify work done) 	<p>Process</p> <ul style="list-style-type: none"> • Test design and set-up • Support level I & II as necessary • High voltage 600+ (substation work) • Identify hazards and able to teach/train in OSHA regulations • Read CAD via computer • Uses PLC, CNC, DCS to troubleshoot • Proficient in each class of environment • Proficient in NEC (code) 	<p>Process</p> <ul style="list-style-type: none"> • Knowledge of Design techniques • Understand engineering concepts through experience • Can use CAD as a tool (in design) • Programming CNC, PLC, and DCS • Management and budget and scope a job
<p>Key Success Factors</p> <ul style="list-style-type: none"> • Ability to communicate/reporting • Listening skills/ability to follow directions • Comfortable working in a team • Able to have insight and knowledge needed to carry out the job • Available to work 24/7 & overtime 	<p>Key Success Factors</p> <ul style="list-style-type: none"> • Enhanced Level I • Mentor Level I • Work independently 	<p>Key Success Factors</p> <ul style="list-style-type: none"> • Enhanced Level I & II • Supervisory skills • Leadership • Ability to instruct others • Analytical skills 	<p>Key Success Factors</p> <ul style="list-style-type: none"> • Some formal education in principles of engineering. Possibly continuing education (pro-active) • Supervision of other staff/departments
<p>Education/Experience</p> <ul style="list-style-type: none"> • Read and write English • High school/GED, physics a plus • Documented work experience (2 years, need not be in the electrical field) • Knowledge of OSHA • Vocational degree 	<p>Education/Experience</p> <ul style="list-style-type: none"> • Read and write English • Associates degree or higher • Electrical technology • 5 years experience minimum • \$15 - \$20 an hour 	<p>Education/Experience</p> <ul style="list-style-type: none"> • Deliberate/methodical/plan and validate before any action is taken • Associates degree or higher • Journey person • 5 + years as an electrician • \$20+ an hour 	<p>Education/Experience</p> <ul style="list-style-type: none"> • 10 years + • Associates degree or higher • \$20+ an hour



Source – Electrical Manufacturers Summit, October 21, 2013



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Types of Industry Electricians

Construction Electrician

- L Wire Pullers
- Conduit Management
- Wire Types

Panel Builder

Controls Electrician

L PLC's, variable speed drives

- Communications

Facilities Electrician

- L knowledge of 480
- Power distribution

Process instrument



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