BU Job Series Matrix

Job Family: Physical Environment Services	Job Series: Electrician	Job Series Code: X24

Job Series Summary:

The Electrician Job Family includes positions in which the major duties involve the installation, maintenance, and repair of electrical systems and equipment and if permitted, new construction and remodels. Employees in this job family perform journey level work concerned with the proper technical installation, operation and maintenance of electrical systems in university buildings, fire alarm and street lighting systems, communications systems, etc. Assignments may involve work on overhead lines, high voltage cables and other situations with some hazard.

There are two Job Series in the Electrician Job Family. 1) Electrician Job Series includes the Electrician Maintenance, Electrician Specialist and Electrician Leader jobs. 2) Electrician High Voltage Job Series includes the Electrician Specialist High Voltage and the Electrician Lead High Voltage.

These levels are differentiated by the specific type of work performed and the degree of independence with which it is carried out. The High Voltage Electrician and High Voltage Electrician Lead are only found in the utility delivery system environment. The Electrician and Electrician High Voltage job series have separate career paths and require different experiences and skills.

Job Title: Electrician Maintenance	Job Title: Electrician Specialist	Job Title: Electrician Lead
Job Classification Code: 8364	**Job Classification Code: 8371**	**Job Classification Code: 8379**
Pay Range: A37	**Pay Range: A39**	**Pay Range: A41**
Exemption Classification: Non - Exempt	**Exemption Classification: Non - Exempt**	**Exemption Classification: Non - Exempt**
Effective/Revision Date: 11/01/2018	**Effective/Revision Date: 09/01/2024**	**Effective/Revision Date: 09/01/2024**
Job Responsibilities	**Job Responsibilities**	**Job Responsibilities**
• Working under general supervision, these employees perform journey level work involved with the installation, maintenance and repair of electrical systems and equipment, new construction and remodels. • They may work alone or as part of a crew depending on the work assignment. • Assignments are normally received in the form of work orders, blueprints, sketches, or verbal instructions. • Routine work is performed independently and is inspected in progress and upon completion for compliance with specifications. • Direction is received from an Electrician Specialist, Lead Person or Supervisor.	• Employees in this classification are responsible for working on electrical systems and equipment with minimal technical assistance from a lead or supervisor. • They perform work planning for complex projects and may direct the work of other electricians. • They diagnose problems independently and may at times schedule their own work and determine work priorities. • Employees in this classification may also be responsible for working on various specialized electrical systems and equipment; for example, performing installation, operations and maintenance functions in alarms and control systems and/or electrical cable, and other specialized electrical gear Electrician Specialists perform these specialized duties under general supervision from the Shop Supervisor.	• Lead and direct two or more Electrician Maintenance and/or Electrician Specialist in addition to performing the duties specified for the Electrician Specialist classification. • Employees at this level do not have supervisory authority over other employees and are not expected to exercise independent judgment on final decisions regarding quality or quantity of work produced by such employees, or personnel actions such as hiring, promotion, discharge or disciplinary measures.

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Characteristic Duties	Characteristic Duties	Characteristic Duties
The duties listed under this section are designed to provide a representative sampling of key tasks and/or responsibilities associated with the job. They are not intended to be a complete list of all the duties performed by employees in the classification.	The duties listed under this section are designed to provide a representative sampling of key tasks and/or responsibilities associated with the job. They are not intended to be a complete list of all the duties performed by employees in the classification.	The duties listed under this section are designed to provide a representative sampling of key tasks and/or responsibilities associated with the job. They are not intended to be a complete list of all the duties performed by employees in the classification.
• Perform electrical preventative maintenance on all electrical equipment from distribution panels to receptacles and loads. Troubleshoot and repair faulty electrical distribution equipment. • Maintain light and power circuits, control circuits, electric motors of various sizes and types, lighting fixtures, transformers, communications systems, standby battery power circuits and equipment, making repairs as necessary. • Test as necessary for short circuits, grounds, and other electrical disorders and take corrective measures as indicated. • Perform configuration management, trace and label electrical systems, red line prints, and document findings for engineering and draftspersons. • Plan layouts and install conduits, circuits, wires, cables, pull boxes, transformers, switches, lighting fixtures and other related equipment required in making additions, extensions, or alterations in electrical systems, or in new construction. • Repair and replace defective parts in motors, generators, pumps, storage batteries, switchboards, controllers, switches, and other related equipment. • Calibrate and align Instrumentation and meters for optimal performance. • Splice multiple conductor cables used in 600V and below electrical power distribution systems; troubleshoot and repair faulty or failed splices; testconductors for dielectric strength and continuity; cleans, and splice corresponding conductors, and connections. • Adhere to safety rules.	• Perform estimates and detailed scope of work for complex new or updated electrical systems and equipment. • Enter data and maintain database of preventive maintenance and drawings or schematics • May work alone, or give direction, instruction or assistance to other Electrician Specialist, Electrician Maintenance or other maintenance persons. • Install, maintain, or repair variable frequency drives, Uninterruptable Power Supply (UPS) and generator systems. • Work on and maintain electrical power distribution systems under 600 Volts AC/DC including motor control centers. • Lay out, install and troubleshoot industrial and motor control circuits involving relays, Programmable Logic Controllers (PLC) and other industrial control components and systems. • May service and test circuit breakers. • May coordinate and support outside vendors and contractors. • May perform any of the duties described in the Electrician Maintenance specification or other duties as assigned.	• Assign and explain tasks to workers based on instructions specifications received from supervisor • Inspect work for conformance with specifications. • Train employees to meet quality and quantity standards. • Advise supervisor of work progress. • Promote adherence to safety rules. • May perform any of the duties described in the Electrician Specialist specification or other duties as assigned.

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Minimum Education and Experience Required	**Minimum Education and Experience Required**	**Minimum Education and Experience Required**
• This skill level is generally associated with 4 years of experience in the trade. • Journey level knowledge equivalent to four years completion in an approved electrician apprenticeship program or a combination of equivalent education and work experience.	• In addition to the education listed for the Electrician Maintenance, Electrician Specialist must have 7 years of work experience, with several years spent working in an appropriate specialized area, and/or in special training.	• In addition to the education and qualifications listed for the Electrician Specialist, Electrician Leader must have the following qualifications listed below.
Minimum Qualifications	**Minimum Qualifications**	**Minimum Qualifications**
• Ability to use computers and other electronic devices and learn departmental programs for planning, scheduling and documenting work. • Compliance with, federal, state and local electrical and work safety standards. • Ability to create and read wiring diagrams, single-line and three-line diagrams. • Working knowledge of the theory of operations of various types of communications systems, motors, illumination systems, power systems, heating appliances and other electrical equipment. • Must have knowledge of NFPA and CAL-OSHA standards on electrical and work safety procedures. • Experience in electrical construction and the installation, maintenance, and operations of a wide variety of electrical equipment such as that described above. • Must have ability to use a variety of tools and instruments such as hand tools of the trade: voltmeter, ohmmeter, current meter, motor analyzer, megger, circuit tracing equipment, hydraulic bending equipment, motorized cable pulling equipment, etc. • Demonstrated ability to follow written and/or oral instructions.	• In addition to the qualifications listed for the Electrician Maintenance, Electrician Specialist must have sufficient experience in a wide variety of electrical work to work independently, without assistance most of the time and give direction, instruction and support to others. • Electrician Specialists may be required to have experience in electronic and microprocessor based controls, relays, interpretation of electronic schematics, variable frequency drives, motor control centers or other specialized areas listed above.	• Demonstrated leadership skills. • Demonstrated ability to solve problems. • Demonstrated ability to build and maintain effective working relationships with others. • Demonstrated ability to communicate instructions to others. •
Certificates and Licenses Required	**Certificates and Licenses Required**	**Certificates and Licenses Required**

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• Must possess and maintain a valid California Non commercial Class license*, a good driving record and the ability to operate standard and automatic transmission vehicles and may operate a high lift truck.* • Must have ability to obtain and maintain certification in CPR and First Aid training.(Provided by employer) • Must be certified to the National Electrical Code (NFPA 70E) of the National Fire Protection Association (NFPA).California State Electrical Certification, preferred	• Must possess and maintain a valid California Non commercial Class license, a good driving record and the ability to operate standard and automatic transmission vehicles and may operate a high lift truck. • Must have and maintain certification in CPR and First Aid training. • Must be certified to NFPA-70E • California State Electrical Certification, preferred	• Must possess and maintain a valid California Non commercial Class license, a good driving record and the ability to operate standard and automatic transmission vehicles and may operate a high lift truck. • Must have and maintain certification in CPR and First Aid training. • Must be certified to NFPA-70E • California State Electrical Certification, preferred
Physical Requirements	**Physical Requirements**	**Physical Requirements**
• Ability to obtain and maintain a California Non commercial Class license. • Ability to works on or uses boom lifts, scissor lifts, cranes and forklifts to perform duties. • Constantly stand/walk, lift up to 10 lbs. • Frequently grasp forcefully, perform light/fine grasping, lift up to 20 lbs. • Occasionally perform seated work, knee/crawl, climb, twist/bend/stoop/squat, reach, lift, pull, work above shoulders, operate hand and/or foot controls • Rarely perform desk based computer tasks, use a telephone, write by hand, sort/file paperwork or parts, scrub, sweep and lift 21–50 pounds. • Ability to wear and work in Personal Protective Equipment (PPE), including such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.	• Ability to obtain and maintain a California Non commercial Class license. • Ability to works on or uses boom lifts, scissor lifts, cranes and forklifts to perform duties. • Constantly stand/walk, lift up to 10 lbs. • Frequently grasp forcefully, perform light/fine grasping, lift up to 20 lbs. • Occasionally perform seated work, knee/crawl, climb, twist/bend/stoop/squat, reach, lift, pull, work above shoulders, operate hand and/or foot controls • Rarely perform desk based computer tasks, use a telephone, write by hand, sort/file paperwork or parts, scrub, sweep and lift 21–50 pounds. • Ability to wear and work in Personal Protective Equipment (PPE), including such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.	• Ability to obtain and maintain a California Non commercial Class license. • Ability to works on or uses boom lifts, scissor lifts, cranes and forklifts to perform duties. • Constantly stand/walk, lift up to 10 lbs. • Frequently grasp forcefully, perform light/fine grasping, lift up to 20 lbs. • Occasionally perform seated work, knee/crawl, climb, twist/bend/stoop/squat, reach, lift, pull, work above shoulders, operate hand and/or foot controls • Rarely perform desk based computer tasks, use a telephone, write by hand, sort/file paperwork or parts, scrub, sweep and lift 21–50 pounds. • Ability to wear and work in Personal Protective Equipment (PPE), including such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.
Working Conditions	**Working Conditions**	**Working Conditions**

• May be required to work overtime, evenings and weekends, including Holidays, sometimes in inclement weather conditions. • Ability to works on or uses boom lifts, scissor lifts, cranes and forklifts to perform duties. • Ability to work in confined spaces and work at elevated surfaces at heights over ten feet.	• May be required to work overtime, evenings and weekends, including Holidays, sometimes in inclement weather conditions. • Ability to works on or uses boom lifts, scissor lifts, cranes and forklifts to perform duties. • Ability to work in confined spaces and work at elevated surfaces at heights over ten feet.	• May be required to work overtime, evenings and weekends, including Holidays, sometimes in inclement weather conditions. • Ability to works on or uses boom lifts, scissor lifts, cranes and forklifts to perform duties. • Ability to work in confined spaces and work at elevated surfaces at heights over ten feet.

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• May be exposed to radiation or electromagnetic fields, lasers, noise>80db TWA, allergens, biohazards, chemicals, asbestos, hot and cold temperature extremes. • Required to wear appropriate uniform. • May be required to wear Personal Protective Equipment (PPE), including such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.	• May be exposed to radiation or electromagnetic fields, lasers, noise>80db TWA, allergens, biohazards, chemicals, asbestos, hot and cold temperature extremes. • Required to wear appropriate uniform. • May be required to wear Personal Protective Equipment (PPE), including such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.	• May be exposed to radiation or electromagnetic fields, lasers, noise>80db TWA, allergens, biohazards, chemicals, asbestos, hot and cold temperature extremes. • Required to wear appropriate uniform. • May be required to wear Personal Protective Equipment (PPE), including such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.
Work Standards	**Work Standards**	**Work Standards**
• When conducting university business, must comply with the California Vehicle Code and Stanford University driving requirements. • Interpersonal Skills: Demonstrates the ability to work well with Stanford colleagues and clients and with external organizations. • Promote Culture of Safety: Demonstrates commitment to personal responsibility and value for safety; communicates safety concerns; uses and promotes safe behaviors based on training and lessons learned. • Subject to and expected to comply with all applicable University policies and procedures, including but not limited to the personnel policies and other policies found in the University's Administrative Guide, http://adminguide.stanford.edu/ and the appropriate collective bargaining agreement at https://cardinalatwork.stanford.edu/hr-processes policiespolicies/labor-relations-collective-bargaining..	• When conducting university business, must comply with the California Vehicle Code and Stanford University driving requirements. • Interpersonal Skills: Demonstrates the ability to work well with Stanford colleagues and clients and with external organizations. • Promote Culture of Safety: Demonstrates commitment to personal responsibility and value for safety; communicates safety concerns; uses and promotes safe behaviors based on training and lessons learned. • Subject to and expected to comply with all applicable University policies and procedures, including but not limited to the personnel policies and other policies found in the University's Administrative Guide, http://adminguide.stanford.edu/ and the appropriate collective bargaining agreement at https://cardinalatwork.stanford.edu/hr-processes policiespolicies/labor-relations-collective-bargaini	• When conducting university business, must comply with the California Vehicle Code and Stanford University driving requirements. • Interpersonal Skills: Demonstrates the ability to work well with Stanford colleagues and clients and with external organizations. • Promote Culture of Safety: Demonstrates commitment to personal responsibility and value for safety; communicates safety concerns; uses and promotes safe behaviors based on training and lessons learned. • Subject to and expected to comply with all applicable University policies and procedures, including but not limited to the personnel policies and other policies found in the University's Administrative Guide, http://adminguide.stanford.edu/ and the appropriate collective bargaining agreement at https://cardinalatwork.stanford.edu/hr-processes

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