

ELECTRICIAN

DEFINITION

Under general supervision, performs skilled electrical work, including maintenance, repair, installation, alteration, and construction of College buildings, systems, and equipment.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the assigned managerial personnel and technical and functional supervision from the Lead Electrician.

CLASS CHARACTERISTICS

This is the journey level in the electrician class series and is responsible for performing electrical maintenance and repair duties at College buildings and facilities required to ensure that all are maintained in a safe and effective working condition and provide the highest level of safety for College and public use. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. Incumbents in this class may also assist other trades on an as needed basis. This class is distinguished from the Lead Electrician in that the latter is responsible for technical and functional supervision of assigned electrician staff and is capable of performing the most complex duties assigned to the function.

EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only)

1. Repairs, installs, tests, services, and maintains electrical systems, including conduit, wiring, light and power circuits, motor appliances, generators, and switches; ensures compliance with building codes applicable to the electrical trade.
2. Plans, organizes, and lays out assigned tasks; interprets electrical plans, diagrams, blueprints, sketches, and specifications; works from verbal and written instructions and work orders to install and test electrical systems or equipment; assists in securing price quotations for supplies and repairs, including multiple quotes as necessary per College guidelines.
3. Operates a variety of specialized equipment, including meters, testers, soldering irons, wire pullers, conduit benders, lifts, drills, and various other hand and power tools; drives a vehicle to perform work.
4. Installs and tests interior and exterior wiring for equipment and appliances; assembles and repairs lighting fixtures, wiring, and controls; installs and repairs sockets, capacitors, bulbs, and other lighting parts, wiring, and assemblies; repairs scoreboards and field lighting systems as needed; installs new electrical systems and equipment, including ballasts.
5. Assists with repairing and maintaining low to medium-voltage systems.
6. Performs preventive maintenance on College-wide electrical panels; checks and services circuit breakers, distribution panels, and transformers; replaces parts as needed.
7. Troubleshoots electrical problems, investigates, and repairs electrical failures.
8. Installs interior and exterior wiring for equipment and appliances.

9. Responds to elevator service calls; inspects and verifies safe and proper operation of electrical systems; requests elevator service mechanics when required.
10. Installs and maintains electrical systems and equipment, including fire alarms; inspects, tests, and repairs smoke and heat sensors, fire alarms, pulls, and panels to meet applicable standards; requires the ability to promptly respond to emergencies, including fire alarms and power outages.
11. Estimates labor, material, and equipment needed for assigned projects; monitors inventory levels of materials and equipment; orders, receives, and maintains inventory of materials and equipment as needed.
12. Records and maintains work and material records.
13. Observes safe work methods and makes appropriate use of related safety equipment as required.
14. Maintains work areas in a clean and orderly condition, including securing equipment at the close of the workday.
15. Provides needed information and demonstrations concerning how to perform certain work tasks for new employees.
16. Assists other College employees with various projects, including carpentry, plumbing, and HVAC, as well as other maintenance areas, by performing skilled, semi-skilled, and unskilled duties on an as-needed basis.
17. Installs, commissions, repairs, and maintains electric vehicle (EV) charging stations; obtains and maintains certifications required by manufacturers for operating and repairing charging stations; ensures stations are operational, safe, and accessible to users.
18. Troubleshoots and repairs major battery storage components such as inverters, UPS systems, and related emergency backup equipment, ensuring efficient and reliable operation.
19. Troubleshoots and repairs major commercial, large-scale photovoltaic systems; monitors, tests, and maintains solar sensors, transformers, inverters, weather instrumentations, and fuel cell equipment; identifies and repairs issues with electrical and mechanical equipment and replaces parts as needed.
20. Troubleshoots, configures, programs, and implements lighting control systems such as N-light, Lutron, Wattstopper, DMX, etc.; ensures effective integration with Building Management Systems (BMS) and relevant control software; conducts assessments to ensure compliance with California Energy Codes and other relevant codes.
21. Supports and complies with federal and state laws, Board Policies, and Administrative Procedures.
22. Provides quality customer service when interacting with the public, vendors, students, and College staff, including individuals from minoritized groups.
23. Participates on committees, task forces, and special assignments, including, but not limited to Screening and Selection Committees and affiliated mandated trainings, as required. Prepares and delivers oral presentations related to assigned areas if needed.
24. Works directly with people from various ages, disabilities, socio-economic levels and ethnic groups.
25. Maintains regular attendance.
26. Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

1. Principles, practices, methods, equipment, materials, and tools used in electrical maintenance and repair of College electrical systems, including applicable electrical codes.
2. Safe application, operation, and maintenance of tools and equipment used in the electrical trade.
3. Installation, commissioning, and maintenance procedures for EV charging stations.
4. Installation, commissioning, and maintenance procedures for fire alarm systems.
5. Installation, commissioning, and maintenance procedures for battery inverter systems and lighting control systems.
6. Maintenance and repair procedures for photovoltaic systems.
7. Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
8. Occupational hazards and safety equipment and practices related to assigned area of responsibility.
9. Standard office practices and procedures, including the use of standard office equipment and basic record-keeping.
10. Safe work practices, including safe driving rules and practices.
11. English usage, spelling, vocabulary, grammar, and punctuation.
12. Techniques for providing a high level of customer service by effectively interacting with the public, vendors, students, and College staff, including individuals of various ages, disabilities, socio-economic levels and ethnic groups.

Skills & Abilities to:

1. Perform a variety of complex technical tasks related to electrical installation, repair, and maintenance work.
2. Perform basic preventative maintenance of electrical equipment and systems.
3. Skillfully and safely operate a variety of equipment and power and hand tools used in the electrical field.
4. Troubleshoot electrical problems.
5. Determine materials, costs, and supplies required for electrical repairs and maintenance projects; recommend purchases.
6. Read, understand, apply, explain, and ensure compliance with applicable federal, state, and local policies, procedures, laws, and regulations.
7. Understand and follow written and verbal directions, instructions, and safety rules and procedures.
8. Maintain accurate logs, records, and basic written records of work performed.
9. Operate modern office equipment, including computer equipment and software programs.
10. Read and interpret construction drawings, specifications, plans, manuals, diagrams, blueprints, and technical regulations.
11. Use math applicable to the electrical trade such as basic math, algebra, geometry, trigonometry, and physics.
12. Operate a truck, tow equipment, and observe legal and defensive driving practices.
13. Organize own work, set priorities, and meet critical time deadlines.

14. Communicate effectively through various methods.
15. Learn and apply emerging technologies and, as necessary, to perform duties in an efficient, organized, and timely manner.
16. Understand scope of authority in making independent decisions.
17. Review situations accurately and determine appropriate course of action using judgment according to established policies and procedures.
18. Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

1. Equivalent to the completion of the twelfth (12th) grade; and
2. Three (3) full-time equivalent years of experience in journeyman level electrical maintenance and repair work.

Desirable Qualifications:

A certification as a qualified journey level electrician from an approved institution.

Licenses and Certifications:

The incumbent is required to drive to a variety of locations. This will require the incumbent to possess and maintain a valid California driver's license and proof of automobile insurance and maintain insurability under the College's vehicle insurance policy.

PHYSICAL DEMANDS

Must possess mobility to work in and around College buildings and facilities, to operate a motor vehicle and drive on surface streets; strength, stamina, and mobility to perform light to medium physical work, to work in confined spaces and around machines, to climb and descend ladders, and to operate varied hand and power tools and equipment; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Incumbents must possess the ability to lift, carry, push, and pull materials and objects weighing up to 50 pounds, or heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Incumbents work in and around buildings and facilities and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Incumbents may interact with staff and/or public and private representatives and contractors in interpreting and enforcing departmental policies and procedures.