

Maintenance Electrician

Classification	Full-Time Non-Exempt (Gr. 30)
Department	Facilities
Reports To	Assistant Director of Facilities

Job Function

Performs highly skilled maintenance, installation, repair and troubleshooting work involved with campus electrical systems. Electrical work may be performed in several areas including but not limited to campus lighting systems, laboratory systems, heating, air conditioning, ventilation, refrigeration, motors, kitchen equipment, fire alarm, access control and emergency back-up generator equipment. Work involves technical application of electrical principals. Responsible to inspect, maintain and repair physical plant equipment supporting campus operations. Troubleshoots electrical and mechanical problems associated with the campus equipment and services electrical components associated with physical plant buildings.

Essential Elements

1. Installs and repairs electrical systems, apparatus, electrical and electronic components of campus machinery and equipment according to current electric codes, manuals, schematic diagrams, blueprints, and other specifications, using hand tools, power tools, and electrical/electronic test equipment.
2. Installs power supply wiring and conduit for newly installed machines and equipment following electrical code and blueprints, using hand tools and electrical meters/testers.
3. Connects power supply wires to machines and equipment, and connects cables and wires between machines and equipment, following electric codes, manuals, schematic diagrams, and blueprints, using hand tools and test equipment.
4. Inspects, repairs, and performs routine electrical maintenance consistent with department standard operating procedures (SOP's) to ensure 100% safe operation in compliance with building codes and the college's quality standards.
5. Maintains, installs, and repairs electrical system components on such equipment as boilers, automatic doors, fans, lights, receptacles, motors, shop equipment, heaters, motorized bleachers, fire alarm systems, etc.
6. Operates, maintains, exercises, tests, and repairs campus emergency generators (change oil, filter, belts, etc.)
7. Diagnoses malfunctioning equipment such as transformers, motors, and lighting fixtures, using test equipment, and replaces damaged or broken wires and cables, using hand tools.
8. Tests malfunctioning machinery using electrical test equipment. Discusses cause of malfunctions with preventative maintenance mechanics, HVAC technicians, BAS technician, and supervisor to help repair malfunction.
9. Analyzes malfunctions of electrical equipment, using ammeter, voltmeter, ohmmeter, electrical drawings, and visual inspection.
10. Replaces faulty electrical components of machines, such as relays, switches, motors, and position sensing devices, using hand tools.
11. Diagnoses and repairs/replaces faulty electronic components, such as circuit boards.
12. May diagnose and replace faulty mechanical, hydraulic, and pneumatic components of machines and equipment
13. Cuts, threads, binds, and routes conduit lines, and pulls wire through conduit as required.
14. Dismantles and repairs equipment, replacing defective wires, motor brushes, condensers, and burned-out fuses.
15. Responsible for maintaining all documents, records, and files to support maintenance department activities. Maintain records of facilities tree work order service tickets recording materials and time expended.

16. Utilize safety devices and personal protective equipment to minimize the frequency and severity of work-related accidents. The employee is also responsible for using safe practices and methods in the operation of equipment related to this job. Follows standard procedures, techniques, and safety precautions in performance of duties. Attends departmental training, such as safety and equipment training.
17. The employee is further responsible for correcting and/or reporting any conditions within the building or grounds that may be hazardous to employees, students or staff members assigned to the building.
18. Completes daily scheduled equipment, property and campus building inspections. Takes all corrective action up to and including the restriction or removal of faulty equipment/property from daily operations.
19. Maintains all equipment and building inspection, repair and preventive maintenance schedules, logs, files, and records.
20. Properly stores and maintains all college issued tools and related equipment.
21. Operates, maintains, and repairs all types of electrical motors and engines used to power pumps, compressors, and fans.
22. Conducts visual inspections of electrical systems and spaces, documenting readings, noting those that are outside of acceptable tolerances and, when appropriate, rectifying deficiencies.
23. Assists in the creation and execution of preventative maintenance of all equipment as required.
24. Must be able to safely work with different building voltages (120V, 277V, 480V) and implements all necessary safety procedures when working with these voltages and circuitry.
25. Possesses knowledge and ability to perform work on high and low voltage electricity and high- and low-pressure boilers.
26. Interacts and cooperates effectively with student tenants, external contracted service personnel, faculty and building staff. Performs in a highly integrated team environment.
27. Maintains strict adherence to NEC, OSHA, and college safety guidelines and procedures. Maintains a clean work site that minimally interferes with campus business operations.
28. Operates motor vehicles as required.
29. Position is classified as an essential services role. Incumbent must report to work during campus closures to ensure campus-wide facilities services are provided for the college community. Also serves on a rotational 7x24 on-call schedule responding to various campus emergencies.

Non-Essential Elements

1. Proficient use of electrical testing meters, power tools and equipment.
2. Familiarity with Metasys Building Automation System and energy management is helpful.
3. Responsible for snow removal and ice maintenance during inclement weather situations.
4. Performs other duties as assigned.

Required Skills, Training, and Experience

1. High school diploma, technical diploma and/or certificate from a recognized trade school.
2. Must be a licensed electrician (journeyman or master) with minimum 5 years of work-related experience.
3. Thorough knowledge of national electrical code, NFPA, life safety, local building codes and OSHA safety requirements especially as they relate to electrical work.
4. Knowledge of the principles of electricity, electrical maintenance methods, special tools/testing equipment, and hazards of the electrical trade.
5. Skill in the application of methods used in the electrical trade, in the use of hand tools, testing equipment and safe installation of new and replacement parts.
6. Knowledge of power distribution systems, electrical panel boards, and electrical switchgear for single and multiphase systems up to and including 480 Volts.

7. Familiarity with energy management systems, controls, variable frequency drives or high efficiency motors is helpful.
8. Superior repair and troubleshooting capability in electrical systems.
9. Ability to read and understand blueprints, electrical schematic diagrams, and wire circuit drawings.
10. Ability to compute voltage, amperage, and resistance factors using formulas.
11. Must be able to wear and use appropriate personal protective equipment as necessary.
12. Ability to follow detailed work orders and provide accurate documentation and progress reports.
13. Ability to communicate effectively and get along well with fellow workers, administrators, faculty, and students.
14. Valid PA driver's license required and ability to operate a motor vehicle safely.
15. Ability to safely operate high reach lift equipment.
16. Customer service focus and interpersonal communication skills.

Physical Demands

1. Ability to stand, walk, sit, bend, squat, climb, and use arm and hand movements.
2. Ability to carry tools and to handle materials and equipment of 50 to 100 pounds on regular basis.
3. Ability to work at heights on aerial lifts, scaffolding, stepladders and/or extensions ladders.
4. Some duties require lifting, bending, climbing steps, and working from ladders.
5. Ability to work outdoors during inclement weather conditions which include extreme temperatures and other harsh climate conditions.