

**BOARD OF REGENTS
STATE OF IOWA
REGENT MERIT SYSTEM**

Class Title: High Voltage Electrician II

Class Code: 5074

Pay Grade: 215

GENERAL CLASS DESCRIPTION:

Under general supervision, applies knowledge, skills and abilities at the journey level to install, maintain, and repair high voltage (over 600 volts) electrical distribution systems in both underground and overhead installations including but not limited to, transformers, generators, metal enclosed and metal clad switchgear utilizing oil, air, vacuum, solid dielectric or gas insulating means, capacitor banks, metering, advanced high voltage system test equipment, system protective devices, and electrical distribution control systems.

CHARACTERISTIC DUTIES AND RESPONSIBILITIES:

1. Performs all duties and responsibilities of a High Voltage Electrician I.
2. Generates complex switching procedures to allow initial energization and testing of new high voltage equipment and for de-energization and re-energization of portions of the existing electrical distribution systems to safely isolate equipment to complete required tasks.
3. Completes testing of high voltage systems utilizing high voltage meggers, SF6 leak detection equipment, transformer turns ratio tester, power quality monitors, infrared cameras and phase angle meters.
4. Assists with programming of system protective devices and understands all required wiring and system logic.
5. Directs and plans work of other workers.
6. Checks the work of contractors for compliance with contract specifications on new electrical distribution system construction projects.

KNOWLEDGE, SKILLS, AND ABILITIES:

1. Knowledge of the advanced principles of electrical theory, methods and techniques used in the high voltage electrical trade.

The tasks listed under the heading of Characteristic Duties and Responsibilities are examples of the variety and general nature of duties performed by employees in positions allocated in the class. The list is descriptive only and should be used for no other purpose. It is not intended that any position include every duty listed nor is it intended that related duties cannot be required.

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2. Knowledge of the tools and equipment of the high voltage electrical and electronic trade and detailed skill in their safe use, proper care and maintenance.
3. Knowledge of the trade occupational hazards and safety precautions while working in confined spaces, aerial or elevated locations, extreme temperatures, excavations, and other environmental caused conditions.
4. Knowledge of electrical codes, utility standards, and safety programs as governed by rules, regulations and guidelines of OSHA, EPA, NFPA, ANSI, equipment manufacturers, and others.
5. Knowledge of proper bending and lifting techniques and ability to lift and carry at least 100 pounds.
6. Ability to communicate effectively orally and in writing with other department personnel, vendors and suppliers, students, staff, and the general public.
7. Ability to plan and perform work involving the installation, modification and repair of new and existing high voltage electrical systems and related electronic control and protective equipment with minimal guidance by others while maintaining work continuity when unplanned events cause disruptions.
8. Skill to read, understand and interpret installation manuals, specifications, construction drawings, advanced operational and instruction books, one-line diagrams, three line diagrams, and control schematics of high voltage electrical distribution equipment consisting of metal enclosed and metal clad switchgear, circuit breakers, transformers, generators, capacitor banks and associated equipment in a power-generating facility or interconnection utility substation related to the installation, maintenance, troubleshooting, repair and operational requirements.
9. Skill to provide training and instruction in the installation, operation and maintenance of high voltage electrical systems.
10. Skill to make decisions and determine processes to restore electrical service under emergency outage conditions.

MINIMUM ELIGIBILITY REQUIREMENTS:

1. Must have a high school diploma or GED.
2. Eight years of experience in the trade, including apprenticeship, of which four years must be working with high voltage (over 600 volts) or successfully completed the site-specific high voltage training program for the Electrician, High Voltage II.