

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

**Class Title:** High Voltage Electrician I

**Class Code:** 5073

**Pay Grade:** 213

**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 metalclad switchgear utilizing oil, air, vacuum, solid dielectric or gas insulating means, metering and basic control systems.

**CHARACTERISTIC DUTIES AND RESPONSIBILITIES:**

1. Installs, maintains, troubleshoots, calibrates, repairs and replaces high voltage electric distribution systems and related equipment, including but not limited to switchgear, circuit breakers, relays, substation equipment, solid state control systems, power and distribution class transformers, generators, capacitor banks, solid state meters, protection and monitoring systems, cable and conduit. Jobs may require one day to several weeks to complete depending on complexity.
2. Energizes and operates high voltage electrical distribution equipment.
3. Determines jobsite work sequences and safety procedures required, procures materials, coordinates outages, completes work, and places systems back into service.
4. Generates basic switching procedures to allow de-energization of portions of the electrical distribution systems to safely isolate equipment to complete required tasks.
5. Tests power systems utilizing equipment such as phase meters, hi-potential testers, meggers, and infrared thermometers.
6. Assists in directing the work of apprentices and other workers.
7. May perform other electrical duties as required.

**KNOWLEDGE, SKILLS, AND ABILITIES:**

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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1. Knowledge of the principles of electrical theory, methods and techniques used in the high voltage electrical trade.
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, and construction drawings for the basic installation, maintenance and operation of high voltage equipment.

**MINIMUM ELIGIBILITY REQUIREMENTS:**

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