

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

**Class Title: Utility Electrical and  
Instrumentation Technician I**

**Class Code: 5461**

**Pay Grade: 411**

**GENERAL CLASS DESCRIPTION:**

Under general supervision works on motor starters, motor control centers, battery systems, instrumentation and control systems. Installs, maintains, calibrates and repairs electronic, electrical and pneumatic devices and systems.

**CHARACTERISTIC DUTIES AND RESPONSIBILITIES:**

1. Installs, maintains, and repairs utility electrical systems (generally less than 600 volts) including circuit breakers, motor starters, protection systems, motor control centers, conduit, cable tray, cable and wiring.
2. Installs and maintains safety systems including emergency lighting, fire alarm systems, uninterruptible power systems, station batteries, and utility communications systems.
3. Installs, repairs, replaces and calibrates control system equipment and support systems including transmitters, valve actuators, recorders and other sensors.
4. Assists with troubleshooting and maintenance of utility control systems including boilers, turbine generators, chillers, and water treatment systems.
5. Assists with troubleshooting and maintenance of program logic controller (PLC) based auxiliary systems including material handling, ash handling, compressed air, etc.

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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**KNOWLEDGES, SKILLS AND ABILITIES:**

1. Knowledge of utility systems and equipment.
2. Knowledge of tools and methods necessary to troubleshoot and maintain electrical and electronic utility equipment.
3. Knowledge of the principles, methods, and techniques used in the electrical and instrumentation and control trades.
4. Knowledge of the principles of electronics.
5. Knowledge of and ability to interpret local, state, and national electrical codes.
6. Knowledge of OSHA regulations and ability to comply with OSHA procedures.
7. Ability to read and understand blueprints, control system drawings and repair manuals.
8. Ability to perform basic math computations.
9. Ability to communicate effectively.
10. Ability to follow oral and written instructions.
11. Ability to withstand constant high noise, dust, fumes, poor lighting and ventilation, and high temperature levels.
12. Physical requirements: Must be able to move and lift at least 80 lbs. Must be able to climb stairs and work in an industrial environment.

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**MINIMUM ELIGIBILITY REQUIREMENTS:**

1. High school diploma or GED.
2. Journey-level electrician with four years of experience in utility systems, industrial plant, process plant or power plant with electric motor controls and station power systems. Including at least two years experience in electrical, electronic and/or pneumatic control systems; or
3. Graduation from a two-year electrical or instrumentation and control program.

**EFFECTIVE: July 1, 2002**

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