

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

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

**Class Code: 5462**

**Pay Grade: 413**

**GENERAL CLASS DESCRIPTION:**

Under general supervision, works on all utility instrumentation. Troubleshoots and maintains utility control systems, PLC auxiliary systems, control circuits for medium voltage switchgear, and utility distributed control systems.

**CHARACTERISTIC DUTIES AND RESPONSIBILITIES:**

1. All duties of Electrical and Instrumentation Technician I.
2. Calibrates and keeps records on all plant instrumentation, controllers, and control valves.
3. Troubleshoots and maintains control systems including pneumatic and electronic boiler, turbine generator, chiller, and other utility controls.
4. Troubleshoots and maintains program logic control (PLC) based utility auxiliary systems including material handling, ash handling, and compressed air.
5. Assists with troubleshooting and maintaining utility distributed control systems (DCS) using personal computer based workstations.
6. Maintains utility emissions gas, oxygen and opacity analyzers. Prepares periodic reports to regulatory agencies, such as US Environmental Protection Agency and Iowa Department of Natural Resources.

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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7. Interprets and maintains wiring diagrams and schematics on utility systems.
8. Provides training and instructions to other staff members.

**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 trade.
4. Knowledge of the principles, methods, and techniques used in the electronics trade.
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. Skill in calibrating utility instrumentation.
8. Ability to read and understand blueprints schematics, control system drawings and repair manuals.
9. Ability to maintain records
10. Ability to communicate effectively.
11. Ability to follow oral and written instructions.
12. Ability to train and instruct.

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13. Ability to withstand constant high noise, dust, fumes, poor lighting and ventilation, and high temperature levels.
14. 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.

**MINIMUM ELIGIBILITY REQUIREMENTS:**

1. High school diploma or GED.
2. Journey level electrician with six years of experience in utility systems, industrial plant, process plant or power plant with electric motor controls and station power systems. Experience must include at least two years working with electric motor controls, station power systems, and electrical, electronic and/or pneumatic control systems and at least one year of experience with programmable logic controllers (PLCs) and water and gas analyzers, or
3. An AAS or BS degree in electronics or instrumentation and control systems, with two years of experience in utility systems, industrial plant, process plant or power plant. Experience must include at least two years experience with electric motor controls, station power systems, and/or electrical, electronic and pneumatic control systems and at least one year of experience with programmable logic controllers (PLCs) and water and gas analyzers.

**EFFECTIVE: July 1, 2002**