

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

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

**Class Code:** 5463

**Pay Grade:** 417

**GENERAL CLASS DESCRIPTION:**

Under general supervision is responsible for operation and maintenance of the utility distributed control systems.

**CHARACTERISTIC DUTIES AND RESPONSIBILITIES:**

1. All duties of Electrical and Instrumentation Technician I and II.
2. Troubleshoots and maintains utility distributed control systems using personal computer (PC) based workstations.
3. Designs and implements control system changes or new control schemes and advises utility staff of changes.
4. Maintains system documentation, updates systems logs, CAD drawings, configurations, etc., and maintains data backups.
5. Troubleshoots and maintains utility emissions monitoring systems including documentation, logging and data backups.
6. Installs and configures new modules, control stations, firmware and software revisions for the utility computer based control systems.
7. Monitors system performance, using system interfaces, and makes recommendations for system improvements.
8. Provides functional supervision including training and instructions to other staff.

**KNOWLEDGE, 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.

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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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 analyze system problems and recommend system changes.
10. Ability to implement system changes.
11. Ability to install and configure control system hardware and software
12. Ability to maintain system documentation.
13. Ability to communicate effectively.
14. Ability to follow oral and written instructions.
15. Ability to train and instruct.
16. Ability to withstand constant high noise, dust, fumes, poor lighting and ventilation, and high temperature levels.
17. 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 six years of experience in utility systems, industrial plant, process plant or power plant. Experience must include at least four years with electric motor controls, station power systems, and/or electrical, electronic and pneumatic control systems and at least two years of experience with programmable logic controllers (PLCs), water and gas analyzers, distributed control systems, CAD systems and the use of databases and management tools associated with databases; or
3. An AAS or BS degree in electronics or instrumentation and control systems, with four years of experience in utility systems, industrial plant, process plant or power plant. Experience must include at least four years with electric motor controls, station power systems, and/or electrical, electronic and pneumatic control systems and at least two years of experience with programmable logic controllers (PLCs), water and gas analyzers, distributed control systems, CAD systems and the use of databases and management tools associated with databases.

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**REVISION EFFECTIVE:**

**July 16, 2023**