



**Code: 5043**

Family: Construction, Maintenance, and Skilled Labor

Service: Operation and Construction

Group: Electrical and Mechanical

Series: Electrical Construction and Maintenance

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## **CLASS TITLE: ELECTRONICS TECHNICIAN**

### **CHARACTERISTICS OF THE CLASS**

Under supervision, installs, programs, operates and repairs building automated systems (BAS) located in city offices, municipal facilities and airport terminals, and performs related duties as required

### **ESSENTIAL DUTIES**

- Installs, programs, operates and repairs BAS used to control and maintain integrated building management systems (e.g., heating, ventilation and air conditioning, security access and video equipment, lighting, fire safety) in city offices and municipal facilities
- Observes monitoring screens to ensure the proper functioning of security access control systems
- Reads manufacturer specifications, mechanical and control drawings and technical manuals to determine appropriate installation and repair methods to use
- Tests and programs networks using various communication protocols (e.g., LON, Modbus, BACnet)
- Performs on-site inspections of digital controls to ensure the proper operation and sequencing of systems in new and renovated facilities
- Tests and troubleshoots related equipment and devices (e.g., network controllers, routers, gateways, remote input/output modules) and adjusts or replaces defective circuitry or electronic components
- Performs preventive maintenance functions to ensure proper systems operations and to reduce equipment downtime
- Reviews and analyzes building operation and energy reports and modifies program applications to optimize system performance
- Participates in meetings with project managers, contractors and skilled trades to review installation specifications for new BAS
- Records data on inspection results and testing techniques and generates related reports
- Recommends the purchase of parts and equipment used in repairing and maintaining digital controls

**NOTE:** *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

### **MINIMUM QUALIFICATIONS**

#### **Education, Training, and Experience**

- Successful completion of a US Department of Labor registered electrical mechanic apprenticeship training program and journeyman status, or an equivalent combination of education, training, and experience

**Licensure, Certification, or Other Qualifications**

- A valid State of Illinois driver's license is required

**WORKING CONDITIONS**

- Exposure to outdoor weather conditions
- Exposure to loud noise, fumes or dust, oily or wet environment
- Exposure to hazardous conditions (e.g., electrical machinery)

**EQUIPMENT**

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer, local and remote workstations)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves, vest, pads)
- Testing and monitoring equipment (e.g., digital multimeter, psychrometer, LAN cable tester, programmable control units, network controllers, routers)

**PHYSICAL REQUIREMENTS**

- Ability to stand and walk for extended or continuous periods of time
- Ability to climb staircases, ladders, and/or step stools
- Ability to operate applicable tools and equipment

**KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS****Knowledge**

Considerable knowledge of:

- \*digital controls used to control and maintain integrated building management systems in municipal buildings and facilities
- \*programming (LON, Modbus, BACnet) and electronics used in the operation of building automated systems
- \*principles and methods used to install, maintain and repair electronic equipment
- \*repair, maintenance, and preventative maintenance methods, practices, and procedures applicable to building automated systems

Moderate knowledge of:

- \*applicable test instruments, equipment and hand and power tools
- \*troubleshooting and repair practices and procedures
- \*applicable safety and code standards specific to electronic systems

Knowledge of applicable City and department policies, procedures, rules, and regulations

**Skills**

- \*ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- \*MONITORING - Monitor and assess performance of one's self, other individuals, or organizations to make improvements or take corrective action

- \*SYSTEMS ANALYSIS – Determine how a system should work and how changes in conditions, operations and the environment will affect outcomes
- REPAIRING – Repair machines or systems using the needed tools
- TROUBLESHOOTING – Determine causes of operating errors and decide what to do about it

**Abilities**

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense
- REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

**Other Work Requirements**

- INITIATIVE - Demonstrate willingness to take on job challenges
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks
- ANALYTICAL THINKING - Analyze information and using logic to address work or job issues and problems

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All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

\* May be required at entry.

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City of Chicago  
Department of Human Resources  
September, 2015