



**Code: 5813**

Family: Technical Engineering  
Service: Operation and Construction  
Group: Engineering, Designing, and Structural  
Series: Electrical Engineering

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## **CLASS TITLE: ELECTRICAL ENGINEER III**

### **CHARACTERISTICS OF THE CLASS**

Under supervision, the class performs fully functional professional electrical engineering work related to the design, installation, maintenance, and inspection of electrical equipment and systems; and performs related duties as required

### **ESSENTIAL DUTIES**

- Meets with project managers to determine project scope and objectives
- Surveys project location to identify existing utilities, systems and equipment and take field notes
- Drafts preliminary technical drawings, specifications of electrical systems to ensure that installation and operations conform to standards
- Prepares moderately complex design plans detailing electrical power, equipment, material and labor needs and prepares estimates of related costs
- Reviews project design plans and drawings prepared by consultant engineering firms and staff for accuracy and conformance to project requirements and standards and makes or requests changes
- Performs complex calculations to determine electrical power distribution, luminance, and voltage levels
- Writes specifications for the procurement of electrical equipment and systems
- Conducts field inspections of work in progress and equipment and evaluates changes in construction plans
- Inspects new electrical systems and equipment for conformance to plans and specifications and recommends modifications to ensure compliance
- Reviews engineering changes, contract amendments and related costs and submits recommendations to supervisor for review
- Reviews payment vouchers submitted by engineering and construction firms ensuring payment requests reflect completed work according to contract specifications
- Meets with construction contractors and utility companies to coordinate electrical construction work and resolve electrical engineering problems
- Prepares reports on the status of electrical engineering projects
- Maintains records of plans, inspections, permits, work orders, and related documentation

**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**

- Graduation from an accredited college or university with a Bachelor's degree in Electrical Engineering or a directly related field of engineering, plus one (1) year of electrical engineering

work experience, or an equivalent combination of education, training, and experience, provided the minimum degree requirement is met

**Licensure, Certification, or Other Qualifications**

- None

**WORKING CONDITIONS**

- General office environment

**EQUIPMENT**

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator, adding machine)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer)

**PHYSICAL REQUIREMENTS**

- No specific requirements

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

**Knowledge**

Moderate knowledge of:

- \*applicable electrical engineering theories, principles, methods, and procedures
- \*electrical system installation and maintenance methods
- \*procedures and methods for monitoring and maintaining related equipment and instruments
- \*applicable computer software packages and applications
- \*project management principles, methods, practices, and procedures

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

Other knowledge as required for successful performance in the Electrical Engineer II class

**Skills**

- ACTIVE LEARNING – Understand the implications of new information for both current and future problem-solving and decision-making
- ACTIVE LISTENING - Give full attention to what other people are saying, taking time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes
- QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance
- TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it

Other skills as required for successful performance in the Electrical Engineer II class

**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
- MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns
- REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

Other abilities as required for successful performance in the Electrical Engineer II class.

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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  
February, 2017