



**Code: 0619**  
Family: Information Technology  
Service: Administrative  
Group: Clerical, Accounting, and General Office  
Series: Information Technology

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## CLASS TITLE: CHIEF SYSTEMS PROGRAMMER

### CHARACTERISTICS OF THE CLASS

Under direction, manages the maintenance, implementation, and development of operating systems and application software, and performs related duties as required

Assignments at this level typically require comprehensive and advanced knowledge of operating systems and configuration methods and the ability to manage a technical staff of professionals or complex technical or business support team(s). Positions in this class title are allocated across various City departments and perform a wide range of functions that are specific to the operational needs of the department. Common specialty titles of functional roles for positions in this class title include but are not limited to: *Lead/Supervising Systems Software Programmer, Lead/Supervising Software Analyst, Lead/Supervising Application Analyst.*

Examples of the essential core functions that characterize this class are provided below for the purpose of distinguishing the level and scope of duties and responsibilities allocated to this class.

### ESSENTIAL DUTIES

- Directs staff in the analysis and evaluation of operating systems (e.g., mainframes, client/server, Web) for compatibility with existing systems
- Directs the evaluation of system performance for maximum efficiency
- Performs in-depth analysis and design functions for complex or specialized operating systems
- Directs staff or contracted vendors engaged in the preparation of detailed specifications for the development of systems software
- Oversees the coding, testing, and debugging of computer systems programs by contracted vendors or internal staff
- Provides direction in program documentation, testing, and implementation processes
- Directs the maintenance of operating systems by staff including troubleshooting and resolving operational malfunctions
- Advises management on the integration of new technologies into business operations
- Attends conferences to keep abreast of changes in information technology

**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 Computer Sciences, Information Technology/Systems or a directly related field, plus four years of systems programming experience of which two years are in a supervisory role related to the responsibilities of the position, or an equivalent combination of education, training and experience

#### Licensure, Certification, or Other Qualifications

- None

**WORKING CONDITIONS**

- General office environment

**EQUIPMENT**

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Personal computers and peripheral equipment (e.g., desktop computer, laptop computer, hand-held computer, computer terminals, modems, scanner)
- Client/server computer
- Local area/wide area communications network

**PHYSICAL REQUIREMENTS**

- No specific requirements

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

Comprehensive knowledge of:

- \*applicable computer software packages
- \*IT systems development practices, standards, and procedures
- \*computer operating systems
- \*programming logic and languages, data manipulation, and integrated environments

Considerable knowledge of:

- \*methods, practices, and procedures for analyzing and resolving computer-related problems
- commercial computer systems applications and their capabilities
- \*computer systems management
- \*data security policies and processes

Moderate knowledge of:

- methods and techniques of database analysis and design
- \*distributed and centralized computer systems

Some knowledge of:

- applicable federal, state, and local laws, regulations, and guidelines
- business process re-engineering principles and practices
- \*management and supervisory methods, practices, and procedures

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

Other knowledge as required for successful performance in the Principal Systems Programmer 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, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
  - \*CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
  - \*MATHEMATICS - Use mathematics to solve problems
  - \*MONITORING - Monitor and assess performance of one's self, other individuals, or organizations to make improvements or take corrective action
  - \*COMPLEX PROBLEM SOLVING - Identify complex problems and review related information to develop and evaluate options and implement solutions
  - \*MANAGEMENT OF PERSONNEL RESOURCES - Motivate, develop, and direct people as they work and identify the best people for the job
  - \*JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one
  - \*SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes
  - \*SYSTEMS EVALUATION - Identify measures or indicators of system performance and the actions needed to improve or correct performance relative to the goals of the system
  - \*PROGRAMMING - Write computer programs for various purposes
  - \*QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance
  - \*TECHNOLOGY DESIGN - Generate or adapt equipment and technology to serve user needs
  - \*TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it
- Other skills as required for successful performance in the Principal Systems Programmer 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
  - REASON MATHEMATICALLY - Choose the right mathematical methods or formulas to solve a problem
  - 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 )
- Other abilities as required for successful performance in the Principal Systems Programmer class

### **Other Work Requirements**

- PERSISTENCE - Persist in the face of obstacles on the job

- INITIATIVE - Demonstrate willingness to take on job challenges
- LEADERSHIP - Demonstrate willingness to lead, take charge, and offer opinions and direction
- ADAPTABILITY/FLEXIBILITY - Be open to change (positive or negative) and to considerable variety in the workplace
- 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

Other characteristics as required for successful performance in the Principal Systems Programmer 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  
October, 2014