

**CITY OF RICHMOND**  
**CLASS DESCRIPTION**  
**2005**

**CLASS TITLE: SYSTEMS ENGINEER (Data Security)**

Under general direction, performs work of considerable difficulty in analyzing, planning, installing, testing, implementing, documenting, fixing, and tuning computer software; assists clients in use of computer software; and performs related work as required.

**Qualifications:**

The qualifications for the System's Engineer for Zone II and Zone III include:

- Completion of the core curriculum for a Baccalaureate level in Information Systems or related degree; and
- Two years experience with computer software in systems engineering or programming or operations and experience in solving complex computer problems or an equivalent combination of training and experience;

**Core Job Functions:**

The core job functions for the Security System's Engineer in Zone II and Zone III include:

- Assists SE staff in evaluating, analyzing, planning, installing, testing, implementing and maintaining vendor software products for compliance with sound security practices
- Develops operational documentation
- Researches and resolves technical issues by reading and comprehending technical manuals and other vendor documentation
- Assists clients in use of software and techniques
- Remains on call to resolve problems for assigned systems
- Maintains data integrity
- Develops security-related policies and guidelines
- Collaborates with development staff in designing security processes within new and existing application systems
- Provides initial training to DIT Personnel for new functions and procedures
- Performs data analyses, reasons logically, interprets requirements, and develops effective solutions to complex problems
- Maintains data security.
- Monitors system performance and performs advanced system tuning.
- Prepares technical reports and manuals
- Performs threat detection and mitigation
- Completes development and maintenance of policies and procedures to protect data and assets
- Identifies and monitors top vulnerabilities for supported platforms
- Uses SANs model for establishing and monitoring organization's security
- Completes training and education on "human" threats to security
- Performs presentations and training

**Competencies**

**Zone II:**

- Contributes to departmental goal achievement
- Demonstrates knowledge of city audit requirements and adheres to departmental standards

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- Demonstrates knowledge of information processing technology
- Applies and demonstrates verbal and written communication skills
- Supports group decisions, works with group to achieve goals, and handles conflict constructively
- Applies and demonstrates knowledge of the operation of computer systems and peripheral equipment.
- Applies and demonstrates knowledge of job and process control languages, scripting tools, and programming languages in use by city developers.
- Acquires and continuously develops professional/technical skills and knowledge.
- Applies and demonstrates knowledge of the following:
  - Operating systems
  - Testing procedures
  - Operations
  - Problem solving
  - Audits
- Applies and demonstrates knowledge of laws, ordinances and regulations on data access, use and confidentiality
- Demonstrates administrative and technical skills in problem resolution
- Applies and demonstrates knowledge of City systems and processes which emphasize the interrelationships in networked City operations
- Plans, organizes and executes assignments effectively and efficiently including time management and productivity reporting
- Contributes to and enhances customer satisfaction by effectively planning and delivering project work
- Makes use of resources and plans and organizes time effectively
- Applies and demonstrates ability to plan and organize work
- Applies and demonstrates knowledge of systems used by the City.

**Zone III**

- All competencies of Zone II
- Maintains working knowledge of current and projected technology trends.
- Seeks methods and opportunities for cost savings and revenue generation.
- Maintains current working knowledge of open source trends and directions and provides recommendations to management.
- Applies and demonstrates ability to perform periodic internal and third party risk assessments
- Applies and demonstrates ability to perform current and future security vulnerabilities
- Applies and demonstrates ability to perform analysis of information security breaches, violations, or malicious activity

**Skills**

**Zone II**

- Microsoft Office XP (Word, Excel, Powerpoint)
- Microsoft Outlook
- Project Time Accounting
- Audit capabilities

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- Sniffer
- CISCO PIX Firewall configuration and maintenance
- Role based security
- Business Objects system administration via supervisor
- Active Directory
- UNIX
- z/OS
- Windows operating systems
- IIS
- Web/DMZ configuration and protection
- Applies knowledge of basic telephone etiquette;
- Applies knowledge of multiple line telephone system;
- Ability to multitask;
- Applies quality customer service skills;
- Applies knowledge of problem solving;
- Knowledge of basic office equipment;
- Knowledge of time management and organizational skills;
- Applies knowledge of office practices and procedures;
- Applies knowledge of business English and general mathematics;
- Applies knowledge of verbal and written communication skills.
- Ability to read and analyze operating system software
- Understanding of security design and implementation
- Ability to read and analyze system logs and error messages
- Knowledge of vendor support procedures
- Ability to develop, maintain and work in a secured environment with confidential information
- Knowledge of communication protocols and tracing methods
- Knowledge of server administration for z/OS, HP-UX, Microsoft, CISCO and LINUX systems
- Ability to investigate systems under Active Directory

**Zone III**

- All Zone II skills;
- Ability to perform activities against multiple languages
- Ability to perform activities on multiple hardware platforms
- Ability to conduct presentations
- Ability to utilize RACF security
- Ability to develop materials based on CERT and SAN recommendations
- Ability to diagnosis issues resulting from viruses, Trojans, worms or other malicious forms of sabotage.

**ADA COMPLIANCE**

The City of Richmond is an Equal Opportunity Employer. ADA requires the City to provide reasonable accommodations to qualified individuals with disabilities. Prospective and current employees are invited to discuss accommodations.

The City of Richmond is committed to Quality Customer Service.