Approved by the Board of Trustees on September 12, 2023
FLSA: Non-Exempt

SENIOR INFORMATION SYSTEMS PROGRAMMER ANALYST

DEFINITION

Under general direction, provides thought leadership and operational support to the District's information systems, recommends business solutions, and serves as a liaison between departmental users, information technology staff, and third-party vendors; designs, develops, implements, and maintains software and ensures successful integration with existing systems and applications; monitors systems to ensure performance and reliability standards are met; serves as a technical leader and subject matter expert providing recommendations, support, and training to information technology staff and District users in areas of expertise; and performs related duties, as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from assigned supervisory or management personnel. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

This is the advanced-level classification in the Information Systems Analyst series responsible for performing the most complex work assigned to the series. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Positions in the classification rely on experience and judgment to maintain system operations and optimization. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to complete assignments. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements.

EXAMPLES OF TYPICAL JOB FUNCTIONS

Management reserves the right to make reasonable accommodations so that qualified employees with verified medical conditions can perform the essential functions of the job.

- Provides thought leadership and operational support to the District's information systems, recommends business solutions, and serves as a liaison between departmental users, information technology staff, and third-party vendors.
- Performs complex and analytical work of a specialized nature in support of assigned technology programs.
- Uses multiple devices to monitor systems evaluating reliability, conformance to performance metrics, and overall availability; implements, tests, and evaluates the effectiveness of solutions; develops and implements related protocols, policies, procedures, and operating standards.
- Coordinates with other information technology staff to implement application design specifications and coordinate integration across multiple platforms and technologies; maintains effective communications with users regarding vendor activities, problems, status, timelines, and other details.
- Gathers user requirements; analyzes and documents current department practices and procedures to clearly describe processes, and to determine the technical, political, and economic feasibility of providing automated solutions to manual business processes; provides input and recommendations regarding current and proposed business practices and the options for translating such practices into effective system deployments across multiple platforms.
- Designs and writes computer programs using various computer languages and database platforms;

writes programming code and scripts.

- Designs, develops, and creates database structures; develops and implements data migration/conversion techniques for systems conversions and/or upgrades; designs systems/database interfaces; develops standards and strategies to maintain database availability, reliability and security; makes and implements recommendations for current and future data storage requirements.
- Maintain accuracy and integrity of data for meeting mandated reporting requirements; document applicable procedures and collaborate with others to ensure any problems are diagnosed and corrected.
- Identifies system deficiencies or additional resource requirements; develops and implements modified or enhanced systems to increase their efficiency, reliability, and availability; implements, tests, and evaluates the effectiveness of solutions.
- Designs and executes application and quality assurance testing plans to validate functionality; tests, troubleshoots, and de-bugs programs using appropriate technology tools; resolves programming issues; refines data and formats final products.
- Conducts group and/or one-on-one training sessions with application users and/or technology staff to provide information on application functions; designs and prepares training materials.
- Conducts research and stays current on new trends and innovative solutions for technology programs; recommends new technologies which would improve the District's operational effectiveness or services to business and instructional departments.
- Serves as project leader on assigned projects, coordinating and inspecting the work of professional and technical staff; determines project requirements, business needs, purpose or justification; identifies stakeholders, and functional area participation; refines project requirements, scope, objectives, deliverables, acceptance criteria, constraints, assumptions, and alternative solutions; estimates resource costs and overall project budget; identifies project staff roles and responsibilities; determines stakeholder information and communication plans.
- Enforces industrial security best practices to harden systems and secure data.
- Writes and maintains user and technical operating instructions and documentation; prepares training materials and conducts formal and informal training programs; and advises on best practices.
- Provides work direction to lower-level staff on a project basis.
- Works productively and cooperatively with others by demonstrating respect, patience and equitable treatment of all internal and external customers.
- Observes and complies with District and mandated safety rules, regulations, and protocols.
- Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Operations, services, and activities of integrated information technology systems.
- Methods and techniques of evaluating business need requirements to provide technology solutions.
- Principles, methods, and techniques used in designing, developing, testing, and implementing information technology applications.
- Server based operating systems and desktop software applications including system standards, and protocols.
- Principles and techniques of systems planning and programming.
- Concepts and specifics of database management information systems and technology.
- Principles and practices of technology system security.
- Principles and practices of database design, development, administration and management.
- Methods and techniques of system and application integration.
- Principles and practices of Application Programming Interfaces (APIs).
- Implementation of API servers including security hardening.
- Multiple programming languages used in District technology programs.

- Computer hardware and software systems similar to those being used by the District, including business applications, operating systems, and network systems.
- Principles, practices, methods, and techniques of troubleshooting, diagnosing, and resolving hardware and software, and network/telecommunication system issues.
- Project planning, prioritizing and scheduling techniques.
- Research techniques, methods, and procedures.
- Technical report writing practices and procedures.
- Principles and procedures of record-keeping and reporting.
- District and mandated safety rules, regulations, and protocols.
- Techniques of providing a high level of customer service by effectively interacting with students, staff, faculty, representatives of outside organizations, and members of the public, including individuals of diverse academic, socio-economic, ethnic, religious and cultural backgrounds, physical ability, and sexual orientation.
- The structure and content of the English language to effectively perform the work.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Provide professional support to a diverse range of technology systems, hardware, and software.
- Analyze complex user problems, evaluate alternatives and devise efficient, cost-effective, user-friendly solutions.
- Lead the design, development, testing, and implementation of new technology systems.
- Leverage knowledge of the District's business needs to enhance system design and capabilities.
- Install, implement, integrate, administer, and maintain District and third-party applications.
- Design and develop integration with other systems as required by the business.
- Take measures to ensure the integrity of system data.
- Implement database and/or system security measures.
- Monitor systems operational effectiveness, reliability or security vulnerability, and respond accordingly.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies, and procedures and standards relevant to work performed.
- Participate in the development and implementation of technology policies, procedures, and protocols.
- Utilize appropriate diagnostic and testing equipment to detect and resolve hardware and software issues.
- Plan, develop, and facilitate training.
- Prepare clear, concise and accurate technical documentation, user guides, reports of work performed, and other written materials.
- Communicate complex technology issues clearly to non-technical parties.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy, and procedural guidelines.
- Effectively use computer systems, software applications, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing.
- Demonstrate sensitivity to, and understanding of, the diverse academic, socio-economic, ethnic, religious, and cultural backgrounds of community college students.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:
Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Education:

- Equivalent to a bachelor's degree from an accredited college or university with major coursework in computer science, information technology, or a related field.

Experience:

- Four (4) years of increasingly responsible experience providing highly complex technical support to information systems in assigned program area.

Licenses and Certifications:

- None.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. This is primarily a sedentary office classification although standing in work areas and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 50 pounds or heavier weights with the use of proper equipment and/or assistance from other staff.

ENVIRONMENTAL CONDITIONS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.