Position...........................Programmer Analyst III
Department/Site...............Technology and Computer Services
FLSA................................Non-Exempt
Evaluated by....................Network, Central Computing and Telecommunications Supervisor
Salary Range 52

Summary

Conceptualizes, designs, develops, and troubleshoots computer software and systems to support new, enhanced, and maintenance of existing programs, concentrating on instructional and business information systems. Performs advanced analysis, writes intricate code, performs systems modeling, simulation, and analysis in designing operating systems utilities, and working programs containing numerous sub-elements, following systems development and project management procedures. Organizes and conducts projects requiring significant consultations with customer-users to develop enhancements and custom features beyond normal program features. Instructs other Analysts on design of the applications. Ensures integrity of the database structures. Develops interfaces to external systems.

Essential Duties and Responsibilities

- Serves as a technical expert and coordinates systems and applications design, development, and installations to ensure efficient conversion.
- Conceptualizes, analyzes, designs, and programs highly diverse and complex programs for administrative and academic users. Delegates, reviews and writes the code, and completes the documentation to include specifications and notes for all programs.
- Organizes the features included in applications by determining the sequence of detailed operations, determining program outcomes, and designing internal program processes. Sequences program steps and operations and delegates program elements to other analysts and technicians, who, in turn, will independently prepare code and perform installations. Integrates the work of others into large scale and diverse projects.
- Serves as a leader for large and multi-faceted projects by coordinating and otherwise involving staff members from multiple organizational units. Follows systems development life-cycle techniques and utilizes joint application development processes and project management techniques and specialized software packages/applications.
- Defines the scope and objectives for applications, along with constraints and system requirements. Analyzes and defines current organizational functions, processes, sources and uses of information, and other data to determine application needs and requirements.
- Documents workflow that often requires connecting somewhat unrelated functions, using organization and data flow charts and other related materials. Produces application design specifications and documentation on inputs, outputs, and data structures.
- Identifies and documents business processes and workflow that contribute to enhanced information flow by interviewing users, generating process maps, and proposing process solutions. Identifies information, hardware and software to support processes.
- Designs inputs, including data entry screens, scanner forms, files**,** and the internet**.** Designs outputs, including reports, files, and display screens. Designs, develops, and implements logical and physical database structures and relationships for microcomputers and network systems.
- Develops, codes, tests, and maintains application software on legacy and networked

platforms.
- Coordinates and guides the work of lower level Analyst/Programmers in converting applications from one platform to another. Installs, integrates, tests and tunes software according to test results.
- Coordinates and implements data conversions and transitions from old to new systems. Develops user and system documentation.
- Plans and conducts user training, including preparation of training materials.
- Arranges for and provides technical support, problem resolution, and data research for assigned end users.
- Diagnoses and resolves the most difficult software problems from general, often vague, descriptions of the symptom or trouble report. Troubleshoots to determine problem, corrects problems and trains users as needed on procedural changes or proper use. Makes sure that any changes to critical areas are accurate and functioning properly.
- Meets with and advises users on legacy and web-based applications. Participates in "brainstorming" sessions to resolve user questions and problems. Works with external agencies, independent contractors, vendors, and organizations on technology services, applications, and/or data requirements.
- Maintains up-to-date knowledge of evolving computer technologies, including hardware, software releases, languages, problem solving techniques, and development tools.
- Conducts feasibility studies for proposed applications and prepares recommendations. Estimates costs from labor, purchased applications, and equipment, and projects value-added potential in service, productivity, and financial benefit.
- Designs and develops software program and applications.
- Performs other duties as assigned that support the overall objective of the position.

Qualifications
- **Knowledge and Skills**
  - Requires advanced, specialized knowledge of computer applications, operating systems, hardware, telecommunications, and network systems.
  - Requires advanced, progressive, in-depth knowledge of program development techniques, procedures, tools, and documentation requirements as well as the system development life cycle.
  - Requires specialized knowledge of complex principles and procedures of computer systems, including analysis, and design.
  - Requires in-depth knowledge of relational database concepts, design techniques, and tools.
  - Requires in-depth knowledge of computer file methods, structured testing techniques, and programming languages used by the District such as, but not limited to COBOL, Visual Basic, SQL, ASP or others currently in industry use.
  - Requires in-depth knowledge of object-oriented software development techniques, tools, and applications.
  - Requires advanced problem solving and analytical skills sufficient to resolve complex and unprecedented problems.
  - Requires well-developed human relation skills to make formal presentations, facilitate small group processes, conduct training, provide technical support, and determine department needs or problems.

- **Abilities**
  - Must be able to perform all of the relevant duties of the position.
  - Requires the ability to analyze unique, unprecedented, and highly technical problems and develop and apply appropriate solutions.
  - Requires the ability to conduct information interviews through individual conferences and group processes, and then translate user requirements into computer programs and systems.
  - Must be able to coordinate systems development functions and steps and follow logical progressions for programming systems.
  - Must be able to design, program, install, and maintain programs for original and purchased applications and systems, including databases.
  - Requires the ability to design host computer logical and physical database structure and relationships, including those for microcomputer and network systems.
  - Requires the ability to write basic to complex programs with languages used by the District, and using SQL extensions to access a relational database functions.
  - Requires the ability to translate the English language into computer languages and debug program code.
  - Requires the ability to discuss technical information with users, discern their needs and develop programs, systems, screens, etc., which meet those needs.
  - Must be able to communicate technical and complex information to non-technical users.
  - Requires the ability to provide training to on-line users in use of computer equipment and operating procedures.
  - Must be able to prioritize work in order to meet deadlines and maintain schedules.

Physical Abilities
- Incumbent must be able to function effectively indoors engaged in work of primarily a sedentary nature.
- Requires the ability to sit for extended periods of time to accomplish data entry and deskwork.
- Requires sufficient arm, hand, and finger dexterity in order to use a personal computer keyboard, multi-media presentation, and other office equipment.
- Requires normal hearing and speaking skills to communicate in one-on-one and small group settings and distinguish sound prompts from equipment.
- Requires visual acuity to read printed materials and computer screens.

Education and Experience
- A bachelor's degree in computer sciences or a related field, and two years of designing and programming databases and operating systems experience; or, in the absence of a bachelor's degree, an associate degree, or the completion of at least sixty (60) college-level semester units, and four years of designing and programming databases and operating systems experience; or, in the absence of an associate degree, or the completion of at least sixty (60) college-level semester units, six years of designing and programming databases and operating systems experience.

Licenses and Certificates
- May require a valid driver's license.

Working Conditions
- Work is performed indoors where minimal safety considerations exist.