

**MONTGOMERY COUNTY GOVERNMENT
ROCKVILLE, MARYLAND
CLASS SPECIFICATION**

**Code No. 000551
Grade 28
FLSA: E**

SENIOR INFORMATION TECHNOLOGY SPECIALIST*

DEFINITION OF CLASS:

This is advanced level professional information systems technology work. Contacts include other technology specialists, technicians, agency technology end users at all levels, vendors, and individuals outside the government to advise, to present, and to justify proposed courses of action having substantial impact on operations and organizations. The work involves providing limited service and assistance to the public.

The work of this class involves providing senior level consultation and advice to a project team of specialists or advanced level planning and execution of information technology projects. An incumbent of this class performs duties such as designing and developing databases and troubleshooting database problems; preparing test data and test programs; evaluating, implementing and enforcing system security protocols; providing advanced level support for web-based applications, web sites and eGovernment functions; performing network design, operation and maintenance tasks, and troubleshooting network faults using mapping and discovery tools; providing analysis of planning and policy issues and cost benefit analysis; performing applications software engineering procedures and systems development life cycle planning and implementation; system analysis and administration, and legacy systems management. The work requires a high level of expertise in specific applications, programming languages, web-based applications and eCommerce, and systems, hardware and emerging technology applications in order to lead teams or provide technical expertise in systems work designing, developing, installing and operating systems for large scale and complex technology applications. An incumbent has a technical knowledge base of sufficient depth and breadth to be able to identify a wide range technological issues and problems, and identify solutions related to ongoing or emerging technologies. An incumbent may have full responsibility for aspects of large-scale system life cycles.

The work is performed independently, with little or no technical guidance. Results of the work are considered technically authoritative, and work is reviewed from the standpoint of fulfillment of program objectives. Guidelines for performing the work are broadly stated, and an employee uses considerable judgment to interpret and develop specific procedures and policy recommendations to accomplish work assignments. The complexity of the work is characterized by varied duties involving a wide range of systems design, installation, operation maintenance and security issues and problems requiring the analysis and assessment of unusual or nonstandard matters or data which is incomplete or contradictory. The work involves developing creative solutions and resolving critical system problems. The work of this class has a substantial effect on County operations. The work is primarily sedentary, primarily performed in an office environment, and involves no significant hazards to an employee. An incumbent uses a keyboard and video display terminal in the work; however, use of this equipment is not production-oriented.

EXAMPLES OF DUTIES: (Illustrative Only)

Leads technical project teams involved in developing major applications and systems through all phases of the development of life cycle activities designing, testing, implementing and maintaining applications. Provides project leadership or senior advisory role related to such functional areas as: data access and security administration; data warehousing and management; data and database development; information management; applications programming; geographical information systems; systems analysis; quality assurance or voice processing.

- Provides project management and oversight to in-house technical staff, in-house subject matter specialists, and/or vendors involved in major business application projects that are essential to departmental missions or affect large numbers of people on a long-term or continuing basis; plans, develops, and implements all aspects of technology solutions; coordinate determination of business process requirements; coordinate development of applications by in-house or by vendor technical IT staff; assures that within agreed upon budget, schedules, and timelines are met; coordinates the review, assessment, testing, and modification of the technical product to assure that customer requirements are met; coordinates training, and implementation with IT staff and users.
- Troubleshoots non-standard issues in the operation, maintenance and development of a Local Area Network or Wide Area Network. Addresses operational issues identified by end users. Quickly identifies problems and takes necessary corrective action.
- Develops and administers policies and procedures that promote the management of data as a key asset and shared organizational resource. Develops system documentation and technical standards and guidelines for County-wide use.
- Designs and modifies database management systems. Based on a thorough understanding of such tools as DB2, makes the necessary changes and modifications based on user requirements. Provides assessments of database management approaches and uses, and makes recommendations for modifications. Oversees the introduction of new versions or the migration of new data or information into an existing database management system.
- Prepares specifications for technology procurements at the agency/department level or above. Ensures that terms and conditions of contracts are met.
- Works with user agencies or clients to conduct in-depth analysis of their operations and procedures in order to define system needs and develop suitable systems.
- Provides specifications for the development of program code for new applications or to make modifications or solve operating issues or problems. May write, test, document, and install program code. Oversees testing and debugging of code.
- Provides advice and assistance in the design, implementation, security and evaluation of database organization and integrity, and performs on-going database administration functions.
- Provides advice in the integration of new technology into existing operating systems. Based on a broad based understanding of current systems capabilities, leads or participates in systems integration activities including transition activities between old and new technology. Develops modifications such as "Patching" existing older systems to accommodate operating demands and needs.
- Provides advice and guidance to clients regarding web page development, design and optimization; web-based applications; and eGovernment development.
- Performs related duties as required.

CORE COMPETENCIES/ KNOWLEDGE, SKILLS AND ABILITIES:

Technical Competencies (An incumbent possesses competency in one or more of the technical areas below):

Advanced-level competency in/knowledge of operating systems, including a basic understanding of desktop applications, database management, help desk operations and troubleshooting, user training/support, LAN support, departmental programs, server administration, network administration, system design, emergency control center, and mainframe operating systems and their applications in order to assure continual, uninterrupted operation of computer systems and equipment.

- Advanced-level competency in/knowledge of programming languages and software packages such as JCL, SQL, Visual Basic, Windows, word processing, and other database and data presentation packages to design, develop and support end users.
- Advanced competency in/knowledge of program menus, project planning and evaluation, program development, systems application development, management reporting, web development/maintenance, software/hardware support, troubleshooting, program support, strategic planning, network management, training and emergency control center. Some positions in this class may require the knowledge of job control language and ROSCOE in order to initiate certain operational requests, standard reports and other applications associated with computer operations.
- Advanced-level competency in/knowledge of information systems/network security methods, including plan network implementation, system security, training, mainframe use, network administration, systems analysis, emergency control center, and RFP development, for ensuring, protecting and resolving the security of information systems and network services.
- Advanced-level competency in infrastructure design, including system integration, planning and evaluating, program development, systems applications development, troubleshooting, network management, internet/intranet, contractor management, LAN support, network security, user support, hardware/software support, systems analysis, systems design, voice systems, and RFP development.
- Advanced-level competency in web technology, including database management, new systems solutions, web development/maintenance, internet/intranet, applications development, data warehousing, and eCommerce.
- Advanced-level competency in systems integration, including program menus, application integration, plan network integration, new systems solutions, troubleshooting, strategic planning, contractor management, system security, training, hardware/software support, project management, system design, and voice systems.
- Advanced-level competency in database administration, including program menus, database management, disaster recovery, troubleshooting, data processing and analysis, data warehousing, and customer maintenance service.
- Advanced-level competency in technology applications to conduct research and development activities to plan, implement and administer new technologies.

General Competencies

- Considerable knowledge of relational database structures and systems to consult with users to determine database needs and develop design specifications.
- Considerable knowledge of client/server structures and the ability to create client/server systems that optimize access.

- Considerable knowledge of the principles, methods, and tools for automating, developing, implementing and administering database management systems in order to design database systems and programs which include access methods, access time, file structure, device allocation, validation checks and statistical methods.
Considerable knowledge of principles, methods, and procedures for optimizing, integrating and installing information system components.
- Considerable knowledge of the principles and methods of web technologies, tools and delivery systems.
- Considerable knowledge of the architecture and typology of software, hardware and networks, including LANs, WANs and telecommunications systems, their components and associated protocols and standards.
- Considerable knowledge of computer network, desktop, mainframe operating systems and their applications.
- Considerable knowledge of methods for ensuring, protecting and resolving the security of information systems and network services.
- Considerable knowledge of computer languages and their applications in order to develop operating systems.
- Knowledge of budgeting, procurement, contracting, licensing and related administrative procedures to serve in a lead capacity on major components of large-scale information technology solutions.
- Skill in project planning, design, implementation and acceptance testing.
- Skill in diagnosing and resolving complex system problems.
- Skill in developing workflow diagrams in support of system analysis activities and functions.
- Ability to define organizational data requirements in support of technology applications.
- Ability to organize work, set priorities, and determine resource requirements.
- Ability to make sound, well-informed, creative and objective decisions, perceive the impact and implications of decisions, and commit to action, even in uncertain situations, in order to accomplish organizational goals.
- Ability to apply knowledge of information technology concepts, practices and methods to evaluate alternatives, solve technology problems, and make recommendations.
- Ability to work with clients and customers with courtesy and tact to meet their needs.
- Ability to communicate effectively, both orally and in writing.
- Ability to attend meetings or perform other assignments at locations outside of the office, if necessary.

MINIMUM QUALIFICATIONS:

Experience: Five (5) years of professional experience in the information technology field in areas such as programming, systems analysis, and data/telecommunications, depending on the duties of the position.

Education: Bachelor's degree in computer science or a related field from an accredited college or university, or certifications in specific programming languages or operating systems may be required, depending on the duties of the position. Programming languages might include Visual C++, Visual J++, C++, C, SQL, PowerBuilder, Oracle Developer 2000, and COBOL.

Equivalency: An equivalent combination of education and experience may be substituted. For applicants possessing very hard to find skills which are a critical need to the department/agency, training and certification may be accepted in lieu of full degree requirements.

Special Minimum Qualification (Board of Elections):

Physical Ability: Ability to lift boxed containing computer support items and equipment such as printers, computers, modems and monitors up to 50 pounds.

LICENSE: None.

PROBATIONARY PERIOD:

Individuals appointed to a position in this class will be required to serve a probationary period of twelve (12) months and, if promoted to a position in this class, will be required to serve a probationary period of six (6) months. Performance will be carefully evaluated during the probationary period. Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Medical History review.

Board of Elections: Limited Core Exam.

Fire and Rescue Services: Medical History Review with Drug/Alcohol Screen.

Class Established: July, 2001

Revised: March, 2004

October, 2011

August, 2013

September, 2014

Revised (Medical Protocol): February 2022