INFORMATION TECHNOLOGY EXPERT

DEFINITION OF CLASS:

This is expert level professional information systems technology work. This class exceeds the full performance level of information technology work in the County Government. Contacts include other technology specialists, technicians, agency technology end users at all levels, vendors, and individuals outside the government to advise, present and 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 requires a level of expertise in the information technology field that encompasses the most sophisticated and state of the art applications in systems design, computer languages, operating systems, database management, web development and maintenance, eGovernemnt efforts, and network development, management and implementation. An incumbent of this class is recognized as the resident expert in a particular field, application, software, hardware, or other information technology area such as web technology or network management. The work is performed independently. At this level, highly technical assistance is normally sought in unusual circumstances and is obtained from such individuals as the developers of specific code, equipment or applications. Results of the work are considered technically authoritative, and the 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 evidenced by decision-making in areas of system analysis and development, database administration, and system maintenance and security where issues are largely undefined. The work requires extensive planning and coordination, consideration of a wide range of factors, and complex problem resolution. An IT Expert is faced with the most sophisticated, complex and unusual issues associated with broad information technology applications. These issues can range from specific stand-alone systems, to agency specific systems to government wide systems. The issues can be related to enablement issues, network performance, or technology integration problems. Many of the issues confronted have no precedents, and the incumbent must rely on her or his own technical expertise to formulate creative solutions to correct the problem. An IT Expert is also confronted with the problem of integrating or "patching" old technology into new state of the art technology. An expert level of sophistication is essential because many of the computer systems support critical government functions and activities. 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)

- Serves as the resident expert in troubleshooting the operation, maintenance, and development of a Local Area Network or a Wide Area Network. This includes designing the system configuration and architecture for, at a minimum, a department-wide local area network. This includes the identification of software, hardware, identification of training needs and staff allocations. Defines strategy and directs the acquisition, installation, testing and maintenance of physical storage and access devices.
- Sets database practices policy regarding effective use of database technology.
- Coordinates implementation of new technical architecture, and ensures proper integration into ongoing operations. Leads technical systems implementation teams through the systems development life cycle.
- Resolves the most complex problems related to interfaces and connectivity of multiple hardware platforms, operating systems, database management systems and various other applications.
- Provides expert assessments of technology plans for particular components of department/agency as well as government-wide applications. The assessments conducted include not only the technology aspects but also the financial as well as human capital considerations. Conducts cost benefit analysis, conducts skill and competency assessments to assure the resources are allocated to help ensure success.
- Guides County leaders in the development of strategic technology plans to meet the needs of government programs as well as the needs of the citizens.
- Functions as the resident expert in geographical information systems (GIS). Identifies critical paths to assure that identified applications meet the goals established within the context of the project plans.
- Provides expert advice in the integration of new technology into existing operating systems. Functions as the resident expert in systems integration activities including transition activities between old and new technology.
- Provides expert assistance in modifying existing technology to meet current demands and needs. Modifications include "patching" existing older systems to accommodate operating demands and needs.
- Provides expert advice and guidance to clients regarding web page development, design and optimization, and web-based applications.
- 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):**
- Expert-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.
- Expert-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.
- Expert 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.

- Expert-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.
- Expert-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.
- Expert-level competency in web technology, including database management, new systems solutions, web development/maintenance, internet/intranet, applications development, data warehousing, and eCommerce.
- Expert-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.
- Expert-level competency in database administration, including program menus, database management, disaster recovery, troubleshooting, data processing and analysis, data warehousing, and customer maintenance service.
- Expert-level competency in technology applications to conduct research and development activities to plan, implement and administer new technologies.

General Competencies

- Extensive knowledge of the principles, methods, and tools for automating, developing, implementing and administering database management systems.
- Extensive knowledge of principles, methods, and procedures for optimizing, integrating and installing information system components.
- Extensive knowledge of the principles and methods of web technologies, tools and delivery systems to design, implement and maintain web-based applications.
- Extensive knowledge of the architecture and typology of software, hardware and networks, including LANs, WANs and telecommunications systems, their components and associated protocols and standards in order to provide expert advice, assistance and implementation strategies.
- Extensive knowledge of computer network, desktop, mainframe operating systems and their applications to develop technology strategies.
- Extensive knowledge of methods for ensuring, protecting and resolving the security of information systems and network services.
- Extensive knowledge of computer languages and their applications in order to provide expert advice, assistance, strategy development, utilization and recognition of training needs.
- Extensive knowledge of information systems concepts, practices, methods and principles as well as a comprehensive understanding of evolving industry trends and standards to provide an expert perspective on cutting edge technology issues.
- Extensive technical knowledge to provide advice, to lead, or to implement large and complex information technology solutions for a complete development life cycle.

- Extensive technical knowledge to specify, select, and configure the technological infrastructure, and to carry out the required programming for large and complex technology systems.
- Extensive knowledge of information technology strategic planning, security, quality assurance, policy analysis, and project specifications and evaluation to serve as a consultant and subject matter expert on a wide range of issues.
- Skill in project planning, design, implementation and acceptance testing.
- Skill in diagnosing and resolving the most 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: Six (6) 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: Master's degree in computer science or a related field from an accredited college or university, or certifications in one or more areas or specialties such as Certified Novell Engineer, Certified Novell Administrator, Cisco Certified Internetwork Expert, Cisco Certified Network Professional, Microsoft Certified Solution Developer, Microsoft Certified Systems Engineer, Oracle Certified Professional Developer Track, Certified Information Systems Auditor, or Certified Information Systems Security Professional may be required depending on the duties of the position.

Equivalency: An equivalent combination of education and experience may be substituted.

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.

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Class Established: July, 2001
Revised: October, 2011
August, 2013
January, 2014

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