

Broadbanding Career Group Concept for

**INFORMATION TECHNOLOGY**

The Information Technology (IT) Career Group includes positions that perform, supervise, and/or manage professional information technology (IT) work involving the analysis, design, development, implementation, modification, maintenance and/or development of standards for computer-based information systems and services, databases, networks, applications, and/or security requirements to meet the business needs of an organization. Positions are engaged in such work for a majority of work time and may specialize in one or more specialty areas or serve as a generalist in multiple capacities for an organization or program; or serve as a program manager at the department or central agency level; or as a division administrator/assistant administrator at the central agency level; or as the State's foremost technical expert.

Performance of work requires the application of appropriate standards, competencies, and practices, in accordance with industry standards and guidelines.

**Job Related Competencies Required:** Understand and apply knowledge of information technology principles, concepts, standards, policies and procedures; computer hardware, software, languages and procedures; personal computer (PC), server, mini and/or mainframe operating systems; basic mathematics; problem solving methods and techniques; and report writing.

**FUNCTIONAL TITLES**

**Database Analyst** Designs database applications to specifications provided by higher-level staff. Tests, corrects, monitors and updates developed applications. Evaluates database performance. Tunes and reorganizes databases as needed. Sets up back-up and recovery procedures for databases. Controls access to data in physical database designs for both privacy and security.

**Database Analyst, Senior** Senior level position involved in redesigning databases as business needs change. Designs, codes, tests and executes physical databases from logical designs. Evaluates database quality. Tunes and reorganizes databases as needed. Recommends ways the new database management systems can be implemented.

**Database Manager** Manages the database staff in the planning, design, development and implementation of integrated databases. Formulates policy/procedures affecting database management and projects long-range requirements for database administration in conjunction with other information systems areas. Provides support and information to efficiently execute database administration and processing and ensure database files will support growth and access demands.

**ICSD Administrator** Administers the activities of the Information and Communications Services Division; plans and directs the statewide information processing and telecommunications services and programs, and establishes and operates an overall program for improving government efficiency and effectiveness through telecommunications and information processing technologies.

**ICSD Assistant Administrator** Assists the division administrator in planning and directing the operations of the Information and Communication Services Division including the development and implementation of policies, budget justification and execution plans, and the resolution of daily operational problems. Directs and manages through subordinate branch managers.

**Network Administrator** Responsible for the technical design, configuration, and implementation of local and wide area network solutions between multiple platforms including ongoing technical support to remote area networks, Internet and EDI communications. Has thorough knowledge of multiprotocol systems and extensive implementation experience with multi-vendor network systems. Is responsible for troubleshooting network usage, workstations and computer peripherals. Will develop and implement policies and standards and ensures adherence to security procedures.

**Network Analyst** Leads network projects by recommending solutions to network strategy and security issues. Develops detailed network specifications. Performs network analysis and capacity planning. Develops and recommends approaches to network growth and enhancements. Develops processes and procedures for network operations. Provides network performance monitoring and analysis. Supports installation and maintenance of server hardware and software. Assists in maintenance of all data center equipment.

**Network Manager** Oversees the activities of the computer network. Responsible for all PC/LAN operations, including analysis, programming and procurement. Assigns personnel to various projects and directs activities. Participates in design and implementation of new or modified networks. Develops and implements policy, standards and procedures. Develops long range plans and goals. Competent with network operating systems, applications and development tools including network management applications, database applications, compilers and commercial software.

**Programmer** Under general supervision, studies specific administrative, scientific, or engineering functions to determine, define, and formulate the applicability of new or modified application programs. Identifies all aspects of the assigned problem and evaluates user requirements in terms of the capabilities of the available hardware and software. Develops proper documentation that outlines the logical steps to be followed in solving the problem and prepares systems specifications, including input and output formats.

**Programmer, Senior** Under general direction, plans and performs the analysis of major activities and guides the subsequent design and implementation of systems for the application of electronic data processing or for the improvement of existing data processing applications. Job is primarily concerned with broad aspects of data

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processing systems with the objective of utilizing available hardware, software and personnel resources in the most efficient manner. Develops new and more effective interactions between systems while reducing redundancies in storage and processing. May supervise employees engaged in developing, maintaining, and modifying applications programs.

**Security Analyst** Confers with user community to understand security needs. Plans, develops, writes, implements and reviews security standards, procedures, and guidelines to safeguard systems and databases against accidental or unauthorized modification, destruction or disclosure. Assists in testing security products and control techniques. Assists in communicating security procedures to users. May identify regulatory changes that will affect data/information security and recommends appropriate changes.

**System Analyst** Under general supervision, identifies, analyzes and researches solutions for simple to complex inter/intra departmental problems; works with users to provide ongoing system support. Assists in the analysis and selection of hardware and software; leads system integration testing, interface development, conversion activities and other system implementation tasks as assigned; may prepare and present reports and presentations for system projects. Develops proper documentation of processes.

**System Analyst, Senior** Identifies complex inter/intra departmental problems, evaluates existing systems and technologies, cost and time constraints and recommends most effective solution for systems design. Leads system integration testing, interface development, conversion activities, interaction between systems and other system implementation tasks. Works with users under general supervision and is able to handle all complex technical aspects of system analysis. May oversee activities of lower level employees in the department or supervise resources on special projects.

**System Analysis Manager** Manages employees engaged in the analysis of company activities and oversees subsequent design and implementation of systems involving data processing applications to perform these functions. Oversees the analysis of system solutions in support of the company's operations. Studies the proposals concerning the acquisition and use of computers and also makes recommendations on the action to be taken; assigns personnel to the various projects and directs their training in analysis and methods procedures; confers with company personnel to coordinate their activities with own activities; prepares reports for designated individuals concerning the activities and progress of section; usually is found in a medium or large size installation.

**System Programmer** Under general supervision, maintains and modifies operating systems. Typically works on utility programs, macros, and other general purpose operating programs. Responsibilities include program design, coding, testing, debugging and documentation. May work with new operating programs of moderate complexity and scope, and provides continuing technical support to applications programmers.

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**System Programmer, Senior** Uses a thorough knowledge of current software and hardware capabilities to develop or modify operating systems programs of a high degree of complexity and scope; usually responsible for formulating specifications for applications dealing with the entire operating system. Responsibilities include program design, coding, testing, debugging and documentation. May oversee work of lower level Systems Programmers; carry out feasibility studies and evaluate and recommend new hardware or software systems.

**Telecommunications Analyst** Evaluates user requests for new or modified voice and/or data systems, software and hardware. Develops specifications and technical implementation plans. Recommends alternative solutions to reduce costs or improve service. Plans and coordinates installation dates with users, development and engineering staff and vendors. Follows- up to ensure that service level agreements have been achieved and resolves any outstanding issues. Participates in evaluation of vendor proposals and in developing and documenting operational standards.


**Telecommunications Manager** Sets direction and oversees all telecommunications activity in an organization, including the strategic planning and design of voice, data, video and image telecommunications. Interfaces with IT staff to coordinate telecommunications software, hardware and system capabilities. Formulates broad plans and recommends long and short range changes. Usually reports to Vice President or senior level executives.

**Webmaster** Responsible for maintaining and modifying the organization's Internet/Intranet efforts including content, graphical and multimedia displays, and communications. Supervises development efforts including content, design and production. Responsible for website maintenance, updating existing information and creating new content. Maps the flow of the website, creates general graphics, provides specifications to the Web Author, Web Developer, and outside vendors for the development of databases, interactive applets, and custom graphics. Acts as a liaison between the site and users. Has considerable knowledge of multiple operating systems (e.g., UNIX, Sun SOLARIS, and Mac).

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This is the first career group concept for the INFORMATION TECHNOLOGY career group.

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