INFORMATION TECHNOLOGY SPECIALIST 5

KIND OF WORK

Fifth-level professional work as an expert or highest level of specialized expertise in Information Technology.

DEFINITION

Information Technology:
Information technology positions are those positions where the purpose of the job is planning, developing, operating, maintaining and evaluating information systems.

Impact and Complexity:
The effect, combination, and result of work elements.

Some Consideration Factors:

- Consequence of Errors
- System Availability
- Scope
- Customer Base
- Real Time vs. Non-Real Time (service affecting vs. non-service affecting, on-line vs. off-line)

- Management and Control
- Mission Criticality
- Depth
- Protocols/Languages

- Urgency
- Data Connection/Interconnection
- System Capacity/Speed
- Tasks-Routine/Non-Routine

NATURE AND PURPOSE

Under administrative direction, employees at this level are expert in a specific technology area and are sought out by seasoned practitioners for advice and standards. The focus of work at this level is on investigating new technologies and making recommendations on the best technology fit for agency or statewide use.

- ***Know how*** -- Requires a thorough knowledge of the business of the agency is critical. At this level it is important to be seen as the technical authority in one area. Employees at this level must have a deep understanding of how to integrate multiple systems and have a broad view and major affect on work of the agency or a statewide information technology program.

- ***Problem solving*** -- Work requires employees at this level to negotiate complex solutions to technical problems, while ensuring the solutions meet the defined business needs in a cost effective manner.

  Employees at this level deal with cutting-edge technology. It is critical they are able to maximize the effectiveness of new technology as appropriate.

◆   *__Accountability__* -- Employees at this level are responsible for the largest systems with the highest degree of impact and complexity. Errors can result in spending significant sums of money on inadequate technological solutions or large cost overruns which can prevent an agency from meeting its mission.

Difference between "5" and lower level positions

Employees are Project Managers or lead workers/coaches to other advanced technical specialists on systems and projects of the greatest scope and complexity. Employees are responsible for long range planning and design of system architecture and structure. Analyze, design and approve systems, networks and applications.

EXAMPLES OF WORK (A position may not include all the work examples given, nor does the list include all that may be assigned.)

Serve as a technical advisor and mentor to less experienced Information Technology Specialists to expand their knowledge of, and responsibility for, maintaining operating systems, large telecommunication networks, data bases and transaction processing systems. Explain system software internals and how hardware/software interact within and between computing facilities.

Lead project groups in solving business problems to clearly identify projects and staff, complete work in a timely manner, identify necessary adjustments, make changes, and achieve successful outcomes by planning, monitoring and scheduling cost, time and staffing estimates to complete feasibility studies, and provide information to business clients and management.

Evaluate business systems so that project definitions address issues on multiple levels including technical application, business process, legislative requirements, agency structure and goals, costs and security by using rapid application development and structured analysis techniques.

Coach and develop staff so that project work is completed successfully and staff understand and can perform individual functions for projects, and at times, perform program development to achieve project schedules by instructing on procedures or goals, assessing training or development needs and demonstrating effective performance.

Identify and evaluate system, subsystem , and program and network requirements so that system development meet user and project needs by analyzing information requirements, determining availability of existing hardware and software or need for new hardware and software, and hardware/software purchasing.

Maintain and improve systems management, to achieve performance optimization, preventive maintenance and problem isolation/resolution by planning and analysis, design, development and enhancement.

Develop, establish and monitor change, recovery and fall back processes.

Allocation Factors/Differentiating Work Behaviors

Critical allocation criteria will include one or more of the work behaviors:

◆ Plans, sets design direction, designs major systems, develops architecture and sets technical standards.

◆ Incorrect planning or decisions resulting in major delays, costs and system performance.

◆ Investigates new technologies and makes recommendations on the best technology fit for agency or statewide use.

◆ Oversee multiple projects of varying size and scope.

KNOWLEDGE, SKILLS AND ABILITIES REQUIRED (in addition to those required at the lower level classes)

Knowledge of:

Hardware and software components and capabilities of information systems architecture sufficient to design systems and subsystems that meet specifications, standards and assure a stable and reliable computing environment.

Considerable knowledge of the theory and practice of management as applied to government agencies.

Systems concepts, topologies and protocols, standards and management tools sufficient to perform systems management, performance optimization, preventive maintenance and problem isolation/resolution to assure a stable and reliable computing environment.

Project management principles and practices sufficient to determine program direction, plan work and set goals, monitor and evaluate accomplishments.

Considerable knowledge of the departments' policies, procedures, and programs and business goals.

Ability to:

Analyze computer hardware or software malfunctions and implement solutions under extremely tight time constraints and having significant financial consequences.

Conceptualize systems and detail systems flows at the data element level sufficient to integrate all parts of the system.

Apply techniques such as prototyping, rapid application development, object-oriented programming, and case tools sufficient to complete requirements and develop application programs.

Conceptualize network configuration and technologies to meet new and evolving customer service requirements.

Interact both technically with staff and vendor representatives and functionally with users through verbal and written communications sufficient to present clear and concise reports, to interview and to coach.

Est.:   10/96   T.C.:
Rev.:   04/03   Former Title(s):   002746 Systems Programmer Senior
                                                          002909 Data Resource Management Administrator
                                                          003325 Revenue Information Systems Specialist 2
                                                          003496 Network Designer Senior
                                                          003524 Intertech Network Implementation Consultant