

**OFFICE OF THE SECRETARY OF STATE
DEPARTMENT OF PERSONNEL**

INFORMATION SYSTEMS SPECIALIST

Position Code: K4050

DISTINGUISHING FEATURES OF THE CLASS:

Under general direction, formulates/defines systems scope and objectives. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time and form of desired results. Researches, develops or modifies software programming applications or information systems. Prepares detailed specifications from which programs will be written; designs, codes, testes, debugs, documents and maintains those programs. Applications generally deal with overall operating systems, which include but are not limited to file maintenance routines, telecommunications network, computer accounting and statistical software packages. Competent to work on all phases of systems programming, applications analysis and programming activities. May act as project leader having duties of instructing, directing and reviewing the work of other operating system personnel engaged in the specific project; may have some new and existing software product evaluation responsibilities.

ILLUSTRATIVE EXAMPLES OF WORK:

Typical duties include, but are not limited to, a combination of functions defined in the lower level of this series AND such functions as:

1. Establishes/maintains public contact/working relationships with department officials/outside representatives; maintains extensive user contact; performs comprehensive studies and analysis of user needs/objectives; resolves program intent, output requirements, input data acquisition, and the use of internal checks and controls for complex programming functions; evaluates user's data processing needs; prepares a description of the complex system, develops work plans and cost estimates, and analyzes alternative approaches;
2. Serves as lead for systems projects/maintenance functions including the planning and coordination of staff by instructing, directing and reviewing the work; divides projects into component parts, establishes timeframe schedules, target dates and objectives; develops and coordinates precise problem definitions and system requirements; coordinates planning, installation, testing and implementation in adapting, converting or developing new systems; provides technical coordination and leadership to application programmers on one or more major projects;
3. Conduct technical work in independent systems analysis; assists senior staff in larger systems work; performs extensive maintenance of computer systems on vendor or custom software or hardware; prepares complex custom software and hardware; develops and applies advanced cross-checks and auditing procedures; performs testing and debugging on complex programs or systems; may develop or participate in the development of test data and thorough test procedures; analyzes test results; prepares job control language (JCL) for test run, tests program or system, corrects hardware and/or software operational errors;
4. Reviews and rewrites complex programs; performs highly sophisticated technical work in the design and incorporation of technical tailored software structures; consults and advises users and management in planning, scheduling and using specialized technical software systems; integrating such technical software systems with existing data bases;

INFORMATION SYSTEMS SPECIALIST (Continued)

5. Recommends selection of equipment necessary to achieve improved systems; functions as a high level specialist to administrative/operating personnel in the area of maintenance operations for hardware and software systems; performs large-scale complex computer software implementation duties; performs large-scale computer systems generation or implementation of vendor supplied software, in one or more major software phases;
6. Coordinates or assists in applied research projects of hardware usage, software migration or development, network bandwidth, or system component management; participates in studies of data processing problems; reduces problems to written logical procedural steps; recommends the appropriate application of data processing hardware, software and methods to the resolution of the problem;
7. Performs senior level systems analysis and/or programming work in the revision/improvement of an existing data processing system or the development/documentation of a new system; prepare, define, modify or design complex data processing system definitions, forms, operational flowcharts, computer block diagrams and procedures; develops generalized and detailed systems design; develop/maintain documentation on systems developed, programs, hardware and network configurations; creates systems, explains all facets of system setup and operation including narrative, flowcharts, network diagrams, hardware configuration, etc.;
8. Performs systems tuning and measurement functions of intermediate to large scope on hardware, systems and network; reviews new vendor software releases/hardware upgrades; makes recommendations on the necessity or desirability of utilizing new software releases, hardware upgrades or portions thereof;
9. Perform analysis of user hardware, software and communication requirements, selects complex components for implementation of new services or upgrade of existing service; develop detailed plans for hardware and software configurations, network connection, installation schedules and training plans; coordinate or assist in the installation of required components; directs or provides ongoing support to end users; may perform system administration duties according to established standards;
10. May develop, design or implement physical layout plans, hardware and software configurations, installation schedules and hardware and software installation; may be required to act independently in response to unplanned hardware or software failures; may assist/develop, monitor/maintain standards for application/systems development, hardware selection and network growth; may design, develop or conduct training programs for all levels of users supported by the department; recommends appropriate and necessary levels of training required for department supported systems;
11. Performs other duties as required or assigned which are reasonable within the scope of the duties enumerated above.

INFORMATION SYSTEMS SPECIALIST (Continued)

DESIRABLE REQUIREMENTS:

Education and Experience:

Requires knowledge, skill and mental development equivalent to completion of two years of college with coursework in the computer science field and three years of technical systems and programming experience as would be gained as an Information Systems Technician or any equivalent combination of education and experience.

Knowledge, Skills and Abilities:

Requires working knowledge of systems design and implementation, including the manner in which programs are written, compiled and tested, the methods of operating computers, and the manner in which data is transcribed into a form suitable for reading by computer.

Requires working knowledge of the devices for capturing data for computers and the means available for receiving and transmitting data from remote locations to a computer.

Requires working knowledge of the advantages and limitations of computer communication, and information retrieval systems as management information tools.

Requires working knowledge of the methods, procedures and techniques of conducting feasibility studies for converting to computer applications.

Requires the ability to exercise sound judgement in analyzing, appraising, evaluating and solving problems of a procedural, organizational, administrative and technical nature.

Requires the ability to organize facts and findings, analyze data logically and to present results with clarity and comprehension, orally, in written or graphic form.

Requires willingness to travel and possession of a valid Illinois driver's license as required by individual positions within the class.

Approved by the Secretary of State Merit Commission - March 12, 1996.

Effective - April 1, 1996.

EXAMINATION INFORMATION

Test and Weights: Education and Experience, 100%

Length of Eligibility: 1 year