

SENIOR SYSTEMS SPECIALIST

DEFINITION

Supervises and participates in the development of a variety of new and revised applications and designs of the operating systems for mainframe, mid-range, and desktop computers.

TYPICAL DUTIES

Plans, coordinates, and supervises the:

- Feasibility and structure studies of systems design for hardware and software.

- Design and structure of computer security standards, including software security on District mainframes and mid-range systems.

- Establishment of usage requirements of processors, standard routines, and general purpose software.

- Design and implementation of mainframe and mid-range backup and recovery procedures.

- Resolution of software and hardware problems on District computers.

Consults with vendors, contractors, and consultants relative to the establishment of and adherence to technical standards.

Consults with District technical staff and users regarding systems analysis, design, and implementation.

Reviews, recommends changes in and approves methodology for evaluating performance and implementation of processes to improve productivity.

Reviews and recommends the acquisition of new software and hardware in accordance with District requirements and user capabilities.

Reviews, recommends, and approves modifications to general purpose software, including systems, processors, and standard routines.

Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

The Senior Systems Specialist supervises a group of systems specialists involved in the development of long-range data processing systems, preparation of technical specifications, and analysis of hardware and software requirements.

A Systems and Programming Director supervises and coordinates the analysis, design, programming, and maintenance of information systems for a wide variety of applications to District administrative, business, and school operations.

An Operating Systems Specialist installs, debugs or analyzes, troubleshoots, and configures operating systems software, and interfaces with hardware engineers in isolating hardware issues.

SUPERVISION

General supervision is received from a Systems and Programming Director. General supervision is exercised over a variety of systems specialists and other data processing personnel as assigned.

CLASS QUALIFICATIONS

Knowledge of:

- Functions and use of EDP hardware, software, and services
- Operations research and statistical analysis
- Complex EDP operating and applications systems
- Communications hardware and software
- Data systems analysis and design
- Computer hardware, including mainframes, mid-range and desktop computers, peripherals, and terminals
- Business and educational data processing applications
- Distributed processing techniques
- Mathematical modeling
- Various higher-level programming languages

Ability to:

- Write and orally express difficult concepts clearly and concisely
- Analyze problems in computer operation, program logic, and communications
- Evaluate and adapt new data processing techniques
- Prepare long-range plans
- Perceive problems related to integration of advanced EDP technological developments and develop solutions to complex technical situations
- Represent the District at technical meetings
- Supervise technical personnel effectively

ENTRANCE QUALIFICATIONS

Education:

Graduation from a recognized college or university, preferably with a major in computer science or electrical engineering. Courses in information science, telecommunications, electrical engineering, calculus, operations research, and industrial engineering or an advanced degree in engineering or computer science are desirable. Additional qualifying experience in the fields described below may be substituted for the required education on a year-for-year basis.

Experience:

Four years of experience in one or more of the specialties described below.

Data Base Development

Experience in the maintenance, modification, and improvement of data base management systems, including access methods, definition languages, and teleprocessing software in an installation utilizing third-generation systems that support batch, teleprocessing data base, and real time applications.

Experience with schematic development, data dictionary systems, logical data relationships, data security, development of plans for the conversion of existing systems to data base systems, data base recovery and back-up techniques, on-line data inquiry and updating, and optimum processing techniques. Two years of this experience with DB2 is highly desirable.

Operating Systems Development

Experience in the maintenance, modification, and improvement of operating systems software. At least two years of this experience must have been as an operating systems professional with major responsibility in a large computerized installation. Knowledge of operating systems assemblers and experience with systems generation, panic dump analysis, bootstrap and initialization, the facility inventory, the symbiont complex, the dynamic allocator, activity control, input/output, use of performance measurement and systems monitoring techniques, and development of long-range plans for transition to new operating systems.

Systems Science Development

Experience in developmental work for large scale application systems, use of various computational algorithms, and mathematical modeling to address complex systems questions. Experience in developing detailed systems plans, including responsibility for sizing and proposing hardware systems, cost effectiveness studies, utilization of operations research and economics techniques, software package evaluations, teleprocessing studies, and data security studies.

Telecommunications Development

Experience in the maintenance, modification, and improvement of software for teleprocessing systems and teleprocessing access methods in an installation utilizing third-generation central processing units with a variety of on-line systems and remote job entry applications. Experience with assemblers, communications management systems, and a transaction interface package. Experience in defining and applying system recovery techniques, and in planning and developing teleprocessing networks, teleprocessing software, message handling techniques, and communication processors and controllers.

Special:

A valid California Driver License.
Use of an automobile.

SPECIAL NOTES

1. Exempt from FLSA.
2. An employee in this class may be subject to the reporting requirements of the District's Conflict of Interest Code.

This class description is not a complete statement of essential functions, responsibilities, or requirements. Requirements are representative of the minimum level of knowledge, skill, and/or abilities. Management retains the discretion to add or change typical duties of a position at any time.

Revised
04-13-05
MN

Reviewed
05-02-14
HL