

LOS ANGELES UNIFIED SCHOOL DISTRICT
PERSONNEL COMMISSION

CLASS DESCRIPTION
Class Codes

DATABASE SPECIALIST
OPERATING SYSTEMS SPECIALIST
SYSTEMS SCIENCE SPECIALIST

Units
1073 S
1074 Mgmt. - Unit J
1075 Mgmt. - Unit J

DEFINITION

Develops new concepts to maintain and modify information systems to meet District requirements in a highly advanced and specialized area of information technology.

TYPICAL DUTIES

Consults with technical and managerial personnel and with users and recommends solutions to problems affecting District operations.
Develops and specifies operational designs of a creative and innovative nature for the development and maintenance of information and/or Extract Transform and Load (ETL) systems.
Meets District objectives by formulating and developing systems approaches involving advanced and innovative methodologies, concepts, and techniques.
Recommends long-range development plans in specific areas of data processing.
Analyzes existing hardware products and software packages to determine the feasibility of using existing products instead of developing new systems.
Prepares technical specifications to be used in proposal or quotation requests.
Develops and recommends technical policies.
Evaluates new applications to determine their effect on existing applications, production, and systems software.
May develop mathematical models and database dictionaries of complex information processing systems.
May supervise other data processing personnel as assigned.
Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

A Specialist in one of the classes listed recommends long-range development plans, prepares technical specifications, and analyzes hardware and software requirements for the specified field of data processing systems indicated in the class type.

An Operating Systems Administrator supervises Operating System Specialists involved in the development of advanced data processing systems, preparation of technical specifications, and analysis of large, complex enterprise systems.

A Senior Programmer Analyst, works independently or as a project leader, applies advanced technical proficiency in systems design and programming to the analysis of unusually complex management information problems and requirements and the design of improved information systems.

SUPERVISION

General direction is received from a Deputy Chief Information Officer, the IT Administrator, Shared Technical Services, or the Deputy Director of Data Center Operations. General supervision may be received from an Operating Systems Administrator.

CLASS QUALIFICATIONS

Knowledge of:

- Functions of information technology hardware, software, and services
- Operations research and statistical analysis
- Complex information technology operating and applications systems
- Communications hardware and software
- Data systems analysis and design
- Computer hardware and its capabilities including various mainframes, peripherals, and terminals
- Business and educational data processing applications
- Distributed processing techniques
- Mathematical modeling
- Various higher-level programming languages
- Basic IP addressing and subnet schemes
- Domain name, send mail, and firewall servers

Ability to:

- Write and orally express difficult concepts clearly and concisely
- Analyze the information needs, problems, and procedures of other departments
- Analyze problems in computer operation, program logic, and communications
- Evaluate and adapt new data processing techniques
- Prepare long-range plans
- Solve problems involving integration of advanced technology developments
- Represent the District at technical meetings
 - Analyze and diagnose malfunctions and perform required repairs of computer operation, program logic, and communications
- Use the maintenance shell in repairing system defects and restoring files and file systems
- Design and implement technical modifications
- Work effectively without supervision
- Maintain effective working relationships with District personnel

ENTRANCE QUALIFICATIONS

Education:

Graduation from a recognized college or university with a bachelor's degree, preferably with a major in computer science, information systems, telecommunications, data processing, electrical engineering, or industrial engineering. Graduate level courses in engineering, computer science, and operations research are preferable. Qualifying experience in addition to that required below may be substituted on a year-for-year basis for the required education provided that the requirement of a high school diploma or equivalent is met.

Experience:

Three years of experience in the applicable specialty described below.

Database Specialist

Experience in the maintenance, modification, and improvement of relational database management systems that includes access methods and definition languages. Experience with physical and logical database design, data security, development of plans for the conversion of existing systems to database systems, data inquiry and updating, and

optimum processing techniques also is required. Two years of this experience must have included using Oracle, SQL Server, DB2, or CICS.

Operating Systems Specialist

Experience in the installation, maintenance, and modification of Linux and Microsoft operating system software. Two years of this experience must have been as an operating systems professional with major responsibility in a large computerized installation including professional level experience with Linux (Red Hat or SUSE) or Microsoft is required. At least three years of experience with systems generation, SAN storage systems, enterprise backup/restore systems, dynamic storage and partition allocation processes, and dump analysis is also preferable (this experience may be concurrent). Any of the above mentioned experience must also include at least two years of performance measurement and systems monitoring techniques, and development of long-range plans for transition to new operating systems.

Systems Science Specialist

Experience in developmental work for large scale application systems and use of various computational algorithms and mathematical modeling to address complex systems questions. In addition, the experience must have included responsibility for 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.

Special:

A valid California Driver License.
Use of an automobile.

SPECIAL NOTE:

Operating Systems Specialist and Systems Science Specialist are management classifications.

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
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SJ