

SOFTWARE SYSTEMS ENGINEER

DEFINITION

Analyzes, installs, customizes, optimizes, troubleshoots, and monitors large scale, complex application and system software for the District.

TYPICAL DUTIES

Analyzes, installs, customizes, optimizes, troubleshoots, and monitors complex application and system software such as Enterprise Resource Planning (ERP), database systems, computer operating systems, web servers, application development tools, and systems management tools and utilities.

Provides technical support and advice affecting application and system software projects to the colleges and to the Office of Information Technology.

Installs and uses systems management software to monitor systems activities at multiple sites.

Establishes and monitors system security controls.

Evaluates software packages and new software technologies available from vendors in terms of applicability to the District's system, program objectives, processing efficiency, necessary modifications, and economic feasibility; and makes recommendations regarding procurement.

Undertakes systems capacity planning studies.

Participates in periodic system disaster recovery tests.

Helps assure that software systems work is coordinated with applications systems work to maximize efficiency of the District's computer and telecommunications systems.

Reviews technical manuals and periodicals for information pertinent to software systems.

Confers with computer manufacturers regarding hardware/software interface problems.

Prepares and maintains application and system software documentation.

Trains staff relative to software and new technological processes.

Assists in monitoring District contracts for software packages and services to assure fulfillment of contract terms.

May act for the Software Systems Engineering Manager in his/her absence.

Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

A **Software Systems Engineer** is a member of a technical team responsible for analyzing, installing, customizing, optimizing, troubleshooting, and monitoring large scale, complex application and system software for the District. An employee of this class receives assignments that are geared towards meeting high-level technical goals and objectives and assuring implementation of software that meets those objectives with maximum effectiveness and efficiency.

A **Software Systems Engineering Manager** is responsible for managing the work of technical staff engaged in analyzing, installing, customizing, optimizing, troubleshooting, and monitoring large scale, complex application and system software for the District.

SUPERVISION

General supervision is received from a Software Systems Engineering Manager. Some technical supervision is exercised over staff with lower-level technical skills.

CLASS QUALIFICATIONS

Knowledge of:

Technology and methodology of current application and system software
Application and system software analysis, testing, and maintenance
Command language scripting in Unix, MS-Windows, etc.
Programming languages such as ABAP, Visual Basic, Java, C, C++, Cobol, etc.
Enterprise Resource Planning (ERP) systems such as SAP, Peoplesoft, Oracle, etc.
Database systems such as Oracle, SQL Server, Rdb etc.
System security and access control
Web page design and development using tools such as SAP Portals, .ASP, Dreamweaver, etc.
Principles of central user administration, system security, and software transport management
Principles of systems documentation
Principles, procedures, and methods used in data acquisition, storage, structuring, and retrieval
Characteristics and capabilities of servers, networks, and other related equipment
Principles of training
English usage, spelling, and punctuation

Ability to:

Analyze, install, customize, optimize, troubleshoot, and monitor application and system software
Conduct multiple projects of a complex and technical nature
Respond to highly complex application and system software problems accurately and take appropriate action
Train technical and non-technical staff in the application of new concepts related to software support services
Create clear guidelines, procedures, and documentation
Analyze and interpret detailed systems and procedures
Achieve maximum utilization and efficiency of system resources by using software in the most efficient manner
Analyze and express difficult technical concepts in oral and written communications
Provide technical assistance to users
Meet project schedules and deadlines
Establish and maintain cooperative working relationships with District staff, system users, vendors, and project consultants
Learn new application and system software and update technical skills to adapt to changing technology

ENTRANCE QUALIFICATIONS

Education and Experience:

Graduation from a recognized four-year college or university, with a major in computer science, computer information systems, computer engineering, or a related field **AND** three years of recent, full-time, paid experience in the analysis, design, and implementation of large scale, complex application and/or system software. Experience with an Enterprise Resource Planning (ERP) system is desirable.

Special:

A valid Class "C" California driver's license.
Access to an automobile.