

YUBA COMMUNITY COLLEGE DISTRICT

CLASS TITLE: Senior Computer and Network Specialist

BASIC FUNCTION:

Under the direction of a designated supervisor, using a high level of skills perform technical support in the maintenance, installation, and operation of voice and data networks at the District Office, college campuses and satellite locations.

DISTINGUISHING CHARACTERISTICS:

The incumbents assigned to the Senior Computer and Network Specialist classification perform a variety of technical duties related to hardware, software and networked computer systems. Incumbents perform the more complex functions of designing, implementing and administering Local and Wide Area Networks. The classification requires a depth and breadth of knowledge and experience sufficient to permit the individual(s) to work independently with minimal supervision and exercise leadership and project management skills.

REPRESENTATIVE DUTIES:

Monitor the operation and performance of network, telecommunications and computer systems; verify proper completion of processes and use of system resources including disk space and memory usage; monitor system errors; respond to user complaints concerning system response time and system access. (E)

Implement technical procedures on hardware such as diagnostic, pre-failure checks, upgrades, and interoperability. (E)

Configure, install, and operate heterogeneous, homogeneous, peer-to-peer, and client/server computer systems that include file servers and network peripherals. (E)

Assist with planning, design, implementation and operation of network and telecommunication hardware, software and cabling. (E)

Design and implement a comprehensive system to back-up current data, archive old data and restore data as needed to recover lost data. (E)

Implement and monitor security standards for all network devices and data information stores, including the setup and maintenance of such equipment as routers and access lists, firewalls, intrusion detection servers, client server platforms and VPNs. (E)

Participate in long-range planning efforts; serve in advisory capacity in determining appropriate hardware and software needs for computing and networking. (E)

Participate in testing hardware and software products and make recommendation on their use. (E)

Evaluate and determine repair or replacement alternative for peripheral and network devices. Communicate with vendors and users to obtain information needed to resolve problems. (E)

Plan, design, implement and administer user and group accounts, network printing services, Internet connectivity, network security, and network software applications. (E)

Maintain records of activities; develop and maintain system documentation. (E)

Obtain ongoing training and information to keep skills and knowledge current.

Other related duties as assigned.

KNOWLEDGE OF:

Modern principles, practices and techniques of information technologies design, development, testing, deployment and operation.

Various operating systems scripting languages.

Advanced network and computer system software, including RAID subsystems, power management, and multi-processor operating systems.

Advanced system security.

Firewall configuration and maintenance.

Computer application tuning and systems administration.

Advanced local and wide area network configuration and maintenance, including domain naming system (DNS), directory services, and network protocol layers.

Computer hardware and software concepts, systems, and procedures, including UNIX based enterprise servers and microcomputers with a variety of operating systems.

Operation of computer equipment, including network servers, telecommunications equipment (hubs, routers, switches), and client workstations.

Relational database concepts, tools, and techniques including the use of Structured Query Language (SQL).

Computer application programs, including word processors, spreadsheets, graphics programs, and desktop publishing programs, HTML authoring tools and techniques.

Computer local area network (LAN) wiring concepts, tools and techniques.

Internet applications.

Oral and written communications skills.

Interpersonal skills including tact, patience and courtesy.

ABILITY TO:

Learn District organization, objectives, policies and operations.

Research system and application software maintenance and security updates to assess the applicability.

Plan system software and hardware upgrades to achieve maximum reliability and availability.

Research security threats and develop recommendations for action to minimize threats to the administrative computer servers and data.

Develop, maintain and operate a comprehensive data security system designed to prevent loss of data under all circumstances.

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Develop procedures for ongoing tuning, updates and operation of the administrative computing software to assure maximum performance and reliability.

Install system software upgrades.

Write clear and concise system maintenance and operations documentation.

Use designated computer programming and database query languages, learning new ones as necessary.

Design, develop, implement and use computer databases.

Install, configure, and use Internet server and client application software, including linkages to existing applications.

Work without close supervision; including researching and planning for system maintenance and upgrades.

Work effectively with a diverse student/staff population.

Establish and maintain cooperative and effective working relationships with others.

EDUCATION AND EXPERIENCE:

Any combination equivalent to: bachelor's degree in computer science or related field and four years of relevant and increasingly responsible network and computer systems experience is required. Experience in installation, maintenance, and operations of LANs and WANs is preferred. Work experience may be substituted for education, i.e., two (2) years of work experience equates to one (1) year of education. Experience claimed to satisfy requirements above must be current experience.

ENVIRONMENT:

Office environment.

PHYSICAL ABILITIES:

Hearing and speaking to exchange information.

Seeing to view a computer monitor.

Dexterity of hands and fingers to operate a computer keyboard.

Climbing ladders to string wire for connecting computer devices.

Lifting and carrying moderately heavy objects.

Reaching overhead, above the shoulders and horizontally.

Bending at the waist, kneeling or crouching.

HAZARDS:

Working on ladders at heights.