Long Beach Community College District

CLASS SPECIFICATION
Telecommunications Specialist

Date Adopted: May 22, 2006

FLSA Status: Non-Exempt
EEOC Job Category: Professionals
Union Representation: Represented

GENERAL PURPOSE
Under direction, performs a variety of highly skilled professional duties in the design, development, maintenance and administration of the District's telecommunications and cable plant infrastructures; serves as the point of contact with the District's telephone services providers and coordinates the resolution of service problems; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS
Telecommunications Specialist is responsible for on-going design, development, administration and maintenance of voice communication systems for the District's campuses and facilities, including programming, maintenance and synchronization of telephone switches and coordination and resolution of service issues with telephone service providers. The incumbent is also responsible and trains other staff in design, development, maintenance, upgrading and repair of the District's optical fiber backbone and high speed copper infrastructure for data communications. The incumbent works with consultants and contractors to ensure proper installation and integration of voice and data communications facilities to meet District and industry standards in new offices and class rooms.

Telecommunications Specialist is distinguished from User Support Specialist in that an incumbent in the former class specializes in the design, development and administration of voice and data communications physical infrastructures.

ESSENTIAL DUTIES AND RESPONSIBILITIES
The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class.

1. Plans, evaluates and participates in the design, development, administration, maintenance, repair and support of voice telecommunication systems, facilities and equipment; maintains, programs and synchronizes telephone switches installed in multiple District locations; performs switch database data entry to install, remove or change services, configurations and voicemail system hardware and software; makes recommendations on improvements in switch configurations to achieve optimal utilization of voice communication hardware and software.

2. Monitors telecommunications systems for normal operations; monitors and maintains environmental and safety systems for equipment rooms; reviews and analyzes system and user-generated trouble reports, error messages and alarms; prioritizes, schedules and performs repairs.
3. Works with users and clarifies requests and needs for telephone and voicemail services; installs, moves, replaces and repairs telephone and other voice communication equipment; ensures installed services meet user needs and requirements; develops structured work plans for mass office moves and serves as internal project manager for large-scale, voice telecommunications development and implementation projects.

4. Designs, builds, tests, maintains, repairs and administers voice and data communications cabling infrastructures, including fiber optic and high speed copper cable; conducts site surveys and needs analyses; using appropriate industry standards, plans, designs, constructs and installs cable plant facilities, riser and horizontal wiring and cable, patch panels, jacks and other facilities in offices and classrooms; determines materials, supplies and time estimates for wiring and cabling installation projects; conducts testing of installed and terminated wire to ensure proper connectivity and transmission in accordance with applicable standards; ensures all required labeling and documentation is complete and accurate; coordinates and monitors the work of consultants and contractors to ensure installed telecommunications facilities conform to District and industry standards and building plans and specifications.

5. Using advanced diagnostic tools, performs fault location diagnoses to isolate problems and malfunctions; performs periodic inspection of cable, wiring and other telecommunications facilities in tunnels, vaults, utility holes and building cross-connections; inspects and periodically cleans optical connectors to enhance performance.

6. Maintains contacts with the District's telephone service providers to ensure telecommunications requirements and reliability standards are met; coordinates the resolution of service problems, interruptions and outages; monitors and oversees work performed by contractors to ensure District specifications and standards are met.

OTHER DUTIES

1. Back up other division staff in installing, configuring, troubleshooting and repairing work station hardware, software and network connectivity.

2. Assists in researching and preparing studies of current and future communications requirements; evaluates the feasibility of modifications and upgrades to existing systems; researches new telecommunications technologies for their applicability in meeting District requirements.

QUALIFICATIONS

Knowledge of:

1. Principles and theories of electricity, electronics and computer hardware/software design as they relate to installation and maintenance of telecommunications systems and equipment.

2. Test equipment, tools and materials used in construction, installation, troubleshooting, maintenance and repair of all types of telecommunications equipment and systems.

3. Principles, methods and techniques for installation, configuration, integration and operation of VoIP network systems, components, equipment, devices and software.
4. Cable plant media and wiring schemes.

5. Common sources of trouble in and methods of service and repair of all types of telecommunications systems, facilities and equipment.

6. Industry standards applicable to the work.

7. National Electrical Code, safety and environmental regulations, laws, standards and practices applicable to the work.

8. Current and emerging voice and data communications technologies.

9. Project management principles, practices, methods and techniques.

**Ability to:**

1. Analyze complex telecommunications issues and problems, assess operational needs and develop appropriate, cost-effective solutions.

2. Adapt established practices, procedures and principles of electrical and electronic circuitry to the resolution of problems, conditions and service needs.

3. Build scripts and databases applicable to programming and administering telecommunications system applications.

4. Use equipment, tools, media and other materials in constructing, servicing, installing and repairing telecommunications systems, facilities, cable plant and equipment.

5. Locate and trace trouble in all types of telecommunications systems and equipment.

6. Develop plans and work effectively from blueprints, schematic diagrams, sketches, drawings and instructions.

7. Communicate clearly and effectively, both orally and in writing.

8. Prepare clear, concise and accurate records and reports.


10. Establish and maintain effective working relationships with administrators, managers, faculty, staff, consultants, contractors, vendors, service providers and others encountered in the course of work.

**Education, Training and Experience:**

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from a four-year college or university with a major in communications engineering, electrical engineering or a closely related field; and five years of progressively responsible experience in developing and maintaining a large, multi-site telephone system with multiple end user departments; or an equivalent combination of training and experience.
Licenses; Certificates; Special Requirements:
A valid California driver's license and the ability to maintain insurability under the District's vehicle insurance policy.

PHYSICAL AND MENTAL DEMANDS
The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands
While performing the duties of this job, employees are regularly required to sit; talk or hear, both in person and by telephone; distinguish equipment operating sounds and signal warnings; use hands to finger, handle or feel objects or controls; and reach with hands and arms. Employees are frequently required to stand, walk, stoop, kneel, bend and crouch; climb and balance; and lift or move up to 100 pounds.

Specific vision abilities required by this job include close vision, use of both eyes, peripheral vision, depth perception, ability to distinguish basic colors and shades and the ability to adjust focus.

Mental Demands
While performing the duties of this class, an employee is regularly required to use written and oral communication skills; read and interpret complex documents and information; analyze and solve complex problems; observe and interpret people and situations; use math and mathematical reasoning; learn and apply new information or skills; perform highly detailed work under changing, intensive deadlines on multiple, concurrent tasks; work with constant interruptions; and interact with administrators, managers, faculty, staff, consultants, contractors, vendors, service providers and others encountered in the course of work.

WORK ENVIRONMENT
The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Employees frequently work in outside weather conditions, near moving mechanical parts, and on slippery and uneven surfaces. Employees are frequently exposed to wet or humid conditions, fumes or airborne particles, toxic or caustic chemicals, and risk of electrical shock. Employees occasionally perform work in vaults and tunnels and are exposed to biological hazards. The noise level in the work environment is frequently loud.

Incumbents are subject to 24-hour emergency call out in the event of major telecommunications problems and outages.